



City of Lake Geneva, 626 Geneva St, Lake Geneva, WI 53147- 262.248.3673- www.cityoflakegeneva.com

CITY OF LAKE GENEVA PUBLIC WORKS COMMITTEE
MONDAY, FEBRUARY 28, 2022 4:00 P.M.
LAKE GENEVA CITY HALL; COUNCIL CHAMBERS (LOWER LEVEL)

Members: Chairperson Cindy Flower, Mary Jo Fesenmaier, Rich Hedlund, Tim Dunn, and John Halverson

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AGENDA

1. Meeting called to order by Chairperson Flower
2. Roll Call
3. Comments from the public as allowed by Wis. Stats. §19.84(2), limited to items on this agenda. Comments will be limited to 5 minutes
4. Approval of the January 24, 2021 Public Works Committee meeting minutes as prepared and distributed
5. Director of Public Works Report
 - a. Update regarding Snow Event Reports/Plowing
 - b. Update regarding Winterfest
 - c. Update regarding Equipment/Truck future purchases
 - d. Update regarding striping on Edwards Blvd
6. Parking Manager Report
 - a. Electric Car Charging Stations
 - b. Year Round Parking Program
7. Discussion/Recommendation regarding the 2022 Street Improvement Project- *MSA Engineering*
8. Discussion/Recommendation regarding reinstatement of the Cemetery Board- *Ald. Flower*
9. Discussion/Recommendation regarding revisions to the snow removal policy- *Ald. Flower & City Attorney Draper*
10. Discussion/Recommendation regarding bid award for the signal for Bloomfield Rd and Edwards Blvd- *Kapur Engineering*
11. Discussion/Recommendation regarding the purchase of a 2022 Ford 1-ton dump truck with funds from the Cemetery Equipment Replacement Fund- *DPW Director Earle*
12. Discussion/Recommendation regarding Disc Golf Bridge replacement (*Public Works Committee recommended Bridge #5 and the Board of Park Commissioners recommended Bridge #3; Council referred this to the Public Works Committee for further discussion on December 13, 2021; Public Works Committee directed staff to explore replacing both bridges on December 28, 2021; FLR Committee referred to the Public Works Committee on February 16, 2022*) – *Ald. Flower & Ald. Fesenmaier*
13. Discussion/Recommendation regarding WI DOT Highway 50 Project; including specialized signal equipment and turn lanes- *DPW Earle*

14. Discussion/Recommendation regarding possible roadside/right-of-way/park planting for reduced mowing- **Ald. Flower**
15. Discussion/Recommendation regarding possible signal placement at Interchange North and Center Street- **Ald. Flower**
16. Discussion/Recommendation regarding revisions to the brush collection ordinance- **DPW Earle & City Attorney Draper**
17. Discussion/Recommendation regarding Library Park sidewalk upgrades – **DPW Director Earle**
18. Discussion/Recommendation regarding GAP/Island properties throughout the City- **Building & Zoning Administrator & City Administrator**
19. Discussion/Recommendation regarding signage and possible signalization at Edwards Blvd and Townline Rd- **PD Chief**
20. Future Agenda Items
21. Adjourn

<i>This is a meeting of the Public Works Committee. No official Council action will be taken; however, a quorum of the Council may be present.</i>

CITY OF LAKE GENEVA PUBLIC WORKS COMMITTEE MINUTES
MONDAY, JANUARY 24, 2022 4:00 P.M.
LAKE GENEVA CITY HALL; COUNCIL CHAMBERS (LOWER LEVEL)

Members: Chairperson Cindy Flower, Mary Jo Fesenmaier, Rich Hedlund, Tim Dunn, and John Halverson

Chairperson Flower called the meeting to order at 4:00 p.m.

Roll Call

Present: Flower, Fesenmaier, Hedlund, Halverson, and Dunn

Absent: None

Comments from the public as allowed by Wis. Stats. §19.84(2), limited to items on this agenda. Comments will be limited to 5 minutes

Mary Sibbing, 1725 Hillcrest Drive; Spoke in favor of the Cemetery Board being reinstated to alleviate duties on the Director of Public Works.

Jim Strauss, 1517 Meadow Ridge Cir; Spoke in favor of year round parking for the City.

Spyro Condos, 1760 Hillcrest Drive; Spoke in favor of the snow operations practices. Also spoke in regard to the Cemetery Perpetual Care Funds and them being audited.

Approval of the December 28, 2021 Public Works Committee meeting minutes as prepared and distributed
Motion by Dunn to approve, second by Hedlund. No discussion. Motion carried 5-0.

Director of Public Works Report

Update regarding Snow Event Reports/Plowing

DPW Director Earle noted that the snow reports are in the packet for the committee's review. No action taken.

Update regarding DPW Administrative Assistant Hiring process

Earle stated that the position has been posted and that applications are due February 9, 2022. He hopes to have someone in place by March 2022. No action taken.

Update regarding Ordinance in relation to Snow Removal on Pedestrian Paths

Earle stated that the language change is current with the City Attorney to be drafted. Flower stated that as the motion was made to approve by Public Works, that it go to the Finance Committee for action. No action taken.

Update regarding Cemetery Record Keeping

Earle added that he hopes the new Administrative Assistant will aid in this project and the implementation of the Pontem software for Cemetery tracking. The current records are still located within the cemetery office for public inspection, but they do not leave the office. Fesenmaier would like to see the Cemetery Board reinstated and that this be placed on the next Finance meeting for discussion. Earle stated that there are separate funds for operating and perpetual care that are overseen by the Finance Department. No action taken.

Update regarding installation of Delineator Tubes in Spring 2022

Earle stated that these will be installed in the spring, once the weather is warmer. No action taken.

Update regarding the 2021 Street Improvement Project in relation to striping and installation of bollards

City Engineer Naomi Rausch explained that the striping was redone for turn lanes on Edwards Blvd. Flower identified some other areas on Edwards Blvd that need to have re-striping. No action taken.

Update regarding Brush Collection Ordinance Revision

Earle stated that the language change is current with the City Attorney to be drafted. Flower stated that as the motion was made to approve by Public Works, that it go to the Finance Committee for action. Earle stated that he cannot locate that the City will do a pickup in the spring, but that service is offered regardless. No action taken.

Parking Manager Report

Parking Manager Elder stated that the Parking Enforcement will be starting soon. He added that 101 Walworth County passes were sold in 2020-2021, this was a carryover questions from the previous meeting. Elder added that the committee could explore a way to issue parking passes for a radius from the City versus just within the county. No action taken.

Electric Car Charging Stations

Elder stated that the cost of approximately \$15,000 is about the average between all companies that he researched. No action taken. He added that Alliant may have funds available for this type of project. He added that this would need to go to the Finance Committee and the Council for a recommendation prior to any work being done/explored further. Fesenmaier stated that this should be done as an ordinance and should be done to attract tourists. Earle stated state statute prohibits Cities from selling power as the City does not supply its own power, such as the City of Elkhorn. Flower added that this should be a service for a fee and shouldn't be paid by the tax payers. Elder stated that he will research further and report back to the committee. No action taken.

Year Round Parking Program

Flower added that she requested this item. She feels that there was confusion regarding the short time that parking enforcement is not in effect. Elder believes that the City shut it down during the winter months due to slower tourist traffic and staff limitations. Elder believes that the closure was confusing and maybe year round parking enforcement should be explored. The committee discussion included the desire for additional information for future discussions. No action taken.

Discussion/Recommendation regarding Change Order #3 filed by Wolf Paving Co, Inc for a completion date extension for the 2021 Street Improvement Project- DPW Director Earle & Kapur Engineering

Motion by Hedlund to approve with the additional striping as discussed previously, second by Dunn. Motion carried 5-0.

Discussion/Recommendation regarding Pay Request #3 filed by Wolf Paving Co, Inc for the 2021 Street Improvement project in an amount not to exceed \$175,751.50- DPW Director Earle & Kapur Engineering

Rausch stated that the city will be maintaining approximately \$8,000 in retainage and this includes the changes for change order #2.

Motion by Hedlund to approve, second by Dunn. Motion carried 5-0.

Discussion/Recommendation regarding the bid award for the 2022 Crack Filling & Sealing Project- DPW Director Earle

Earle stated that the bids are in the packet for review and that the street list was previously approved by this committee. He recommended using Fahrner, which included all of the roads approved with an excess of \$20,000. This means that they can do all of roads listed for \$15,000 and additional roads could be added.

Motion by Hedlund to approve to approve awarding the bid to Fahrner Asphalt, second by Halverson. Motion carried 5-0.

Discussion/Recommendation regarding 2022 Street Improvement Project- Ald. Flower

Engineer John Jenkins addressed the committee regarding the 2022 Street Improvement project; he added that there have been changes due to changes in the plan. Jenkins stated that part of the alley between Main St and Darwin St has been added to the project. This would be partially done as it is not in all disrepair. Jenkins then reviewed the rest of the project plan with the committee. Discussion noted there may be a need for temporary easements for some of the work to be done, specifically for grade issues. Jenkins noted that there may be issued with sidewalk ramps adhering to federal guidelines for ADA compliance for sizing issues. He added that he did not see any major heaves or issues on the sidewalk on Wrigley Drive and could put together an assessment. Discussion included possibly special assessing adjacent owners for the work to be done. Any ramps that are redone would need to meet ADA compliance but that any sidewalk maintenance wouldn't necessarily have to as it is conforming to the existing. Jenkins requested a copy of the City's special assessment process/policy.

Jenkins addressed the ramps on Wrigley Drive and noted that some of the angled parking stalls do not meet the current standards. He added that if there is a consistent width to those stalls, it will not create a problem. Changing the lines could

result in the loss of some stalls. Earle added that the work on Wrigley Drive would not be done between Memorial Day and Labor Day. Earle stated that he would like to see this portion maybe delayed so the City can have time for public outreach. Flower would like to see the gathering of public input and public outreach should be a part of all programs moving forward. Earle recommended that Wrigley Drive be removed from the 2022 project and that two other streets be identified to be added in its place.

Motion by Flower to move forward with the 2022 Street Improvement Program with two lets; on with Wrigley Drive/Cook Street for public involvement and the second let be the remaining of the streets in the 2022 program, second by Fesenmaier.

Committee discussion included the curb/gutter and drainage on Marianne Terrace. Flower added that she would like those property owners to be aware of the project intent in this area. Concerns were addressed with the existing landscaping in the right of way and the parking for property owners as well. Dunn suggested vacating this street so that it would be privately maintained. Flower would recommend that Marianne Terrace and Pine Street be added to the second let for the project, as part of the motion. There should be a special meeting held for public input at a future date.

Motion was re-read. Motion by Flower to move forward with the 2022 Street Improvement Program with two lets; on with Wrigley Drive/Cook Street and Marianne Terrace/Pine Street for public involvement and the second let be the remaining of the streets in the 2022 program, second by Fesenmaier.

Motion carried 5-0.

Discussion/Recommendation regarding implementation of additional funds to the for Sidewalk Repair within the 2022 Street Improvement Project- *Ald. Flower*

Earle stated that there have been complaints and areas identified for this funding. No action taken.

Discussion/Recommendation regarding Library Park sidewalk upgrades – *DPW Director Earle*

Motion by Flower to continue, second by Fesenmaier. No discussion. Motion carried 5-0.

Discussion/Recommendation regarding WI DOT Highway 50 Project; including specialized signal equipment and turn lanes- *DPW Director Earle*

Motion by Flower to continue, second by Fesenmaier. No discussion. Motion carried 5-0.

Discussion/Recommendation regarding possible placement of a traffic signal at Center Street and Interchange North- *Ald. Flower*

Motion by Flower to continue, second by Fesenmaier. No discussion. Motion carried 5-0.

Discussion regarding signal plans for Bloomfield Rd and Edwards Blvd- *DPW Director Earle & Kapur Engineering*

Motion by Flower to continue, second by Fesenmaier. No discussion. Motion carried 5-0.

Discussion regarding possible roadside/right-of-way/park planting for reduced mowing- *Ald. Flower*

Motion by Flower to continue, second by Fesenmaier. No discussion. Motion carried 5-0.

Future Agenda Items

- a. GAP/Island Boundary Properties
- b. Townline Rd/Edwards Blvd Intersection Signs/Signal
- c. YMCA Contract- Veterans Park Rentals
- d. Bonding for Road Projects

Adjourn

Motion by Halverson to adjourn, second by Dunn. Motion carried 5-0. The meeting adjourned at 6:01 p.m.

EVENT SUMMARY

SNOW & ICE CONTROL											
2021-2022 SNOW EVENT SUMMARY											
	DATE START	DATE END	SALT BRINE GALLONS	SAND/SALT TONS	SALT TONS	SAND/SALT RUN	FULL-PLOW RUN	SPECIAL COSTS	REGULAR COSTS	TOTAL COST	TOTAL TO DATE
1	12/7/2021	12/7/2021			6.00	x		\$ 426.78	\$ 1,435.00	\$ 1,861.78	
2	12/14/2021	12/14/2021			1.00	x		\$ 71.13	\$ 315.00	\$ 386.13	\$ 2,247.91
3	12/26/2021	12/27/2021			1.25	x	x	\$ 713.91	\$ 875.00	\$ 1,588.91	\$ 3,836.82
4	12/28/2021	12/28/2021	1300		28.50		x	\$ 4,863.71	\$ 10,305.00	\$ 15,168.71	\$ 19,005.53
5	12/31/2021	12/31/2021			12.00	x		\$ 1,628.56	\$ 1,065.00	\$ 2,693.56	\$ 21,699.09
6	1/1/2022	1/2/2022			33.00	x	x	\$ 11,959.79	\$ 13,796.25	\$ 25,756.04	\$ 47,455.13
7	1/5/2022	1/5/2022			14.25		x	\$ 1,013.60	\$ 6,005.00	\$ 7,018.60	\$ 54,473.73
8	1/8/2022	1/8/2022			3.75	x		\$ 766.74	\$ 630.00	\$ 1,396.74	\$ 55,870.47
9	1/12/2022	1/12/2022	600		6.25	x		\$ 582.56	\$ 1,845.00	\$ 2,427.56	\$ 58,298.03
10	1/14/2022	1/15/2022	1800			x		\$ 414.00	\$ 735.00	\$ 1,149.00	\$ 59,447.03
11	1/22/2022	1/23/2022	3800		15.75		x	\$ 5,344.30	\$ 4,477.50	\$ 9,821.80	\$ 69,268.83
12	1/23/2022	1/24/2022			26.00		x	\$ 3,561.88	\$ 18,740.00	\$ 22,301.88	\$ 91,570.71
13	2/2/2022	2/2/2022	3700		4.25	x		\$ 1,153.30	\$ 1,635.00	\$ 2,788.30	\$ 94,359.01
14	2/4/2022	2/4/2022				x		\$ 300.00	\$ 270.00	\$ 570.00	\$ 94,929.01
15	2/7/2022	2/7/2022			20.75	x		\$ 2,325.95	\$ 1,956.25	\$ 4,282.20	\$ 99,211.21
16	2/10/2022	2/11/2022	9000		16.75	x		\$ 4,236.43	\$ 3,985.00	\$ 8,221.43	\$ 107,432.64
17	2/16/2022	2/17/2022	100		16.75	x		\$ 1,964.43	\$ 1,820.00	\$ 3,784.43	\$ 111,217.06
18	2/18/2022	2/18/2022			24.75	x	x	\$ 3,772.97	\$ 2,667.50	\$ 6,440.47	\$ 117,657.53
19											
		TOTAL	20300		231.00						
		TOTAL COST TO DATE						\$ 45,100.03	\$ 72,557.50	\$ 117,657.53	
		AVERAGE COST PER EVENT						\$ 2,505.56	\$ 4,030.97	\$ 6,536.53	
cc:	Public Works Director										
	Street Superintendent										
	Administrator										

Electric Vehicle Charging Stations in Door County

(as of November, 2021)

Sturgeon Bay

[Destination Door County Welcome Center](#)

1015 Green Bay Road, Sturgeon Bay, WI 54235

Free, Available 24-hours a day

2 EV Plugs (J1772)

[Bay Shore Inn](#)

4205 Bay Shore Drive, Sturgeon Bay, WI 54235

Free for registered guests, Available 24-hours a day

Not for general public

EV Plug (J1772)

[Chanticleer Guest House](#)

4072 Cherry Road, Sturgeon Bay, WI 54235

Free for registered guests, Available 24-hours a day

Not for general public

Tesla Charging Station

[Cliff Dwellers Resort](#)

3540 North Duluth Avenue, Sturgeon Bay, WI 54235

Free for registered guests, Available 24-hours a day

Not for general public

EV Plug (J1772) & Tesla charger 80 amp

[Crossroads at Big Creek](#)

2041 Michigan Street, Sturgeon Bay, WI 54235

Free, Available 24-hours a day

EV Plug (J1772) & Tesla charging station

Market Square (Downtown Sturgeon Bay)

301-399 Michigan St, Sturgeon Bay, WI 54235

Free, Available 24-hours a day, except on Saturdays: available after 12:30pm.

2 EV Plugs (J1772)

Baileys Harbor

[Baileys Harbor Town Hall & Library](#)

2392 Co Rd F, Baileys Harbor, WI 54202

Free, Available 24-hours a day

EV Plug (J1772)

[Blacksmith Inn On the Shore](#)

8152 WI- 57 Baileys Harbor, WI 54202

Free for registered guests, Available 24-hours a day

Tesla HPWC

[Gordon Lodge](#)

1420 Pine Drive, Baileys Harbor, WI 54202

Free for registered guests and Top Deck customers, Available 24-hours a day

Tesla HPWC

[The Ridges Sanctuary](#)

8166 Hwy 57, Baileys Harbor, WI 54202

Free, donations accepted. Available 24-hours a day

EV Plug (J1772)

Ellison Bay

[Death's Door Maritime Museum](#)

12724 W Wisconsin Bay Road, Ellison Bay, WI 54210

Free, Available 24-hours a day

EV Plug (J1772)

Ellison Bay Community Center

11953 Hwy 42, Ellison Bay, WI 54210

Nema 14-50

[Hy-Land Court RV Park](#)

11563 Hwy 42, Ellison Bay, WI 54210

Nema 14-50

Ephraim

[Bay Breeze Resort](#)

9844 Water St. Ephraim, WI 54211

Open seasonally May through October.

Free for registered guests, Available 24-hours a day

Free for the public, 9am-5pm by appointment only, must register at the front desk

EV Plug (J1772) & Tesla Charging Station

[High Point Inn](#)

10386 Water St. Ephraim, WI 54211

Free for registered guests, Available 24-hours a day

Not for general public

EV Plug (J1772)

[The Hillside Waterfront Inn](#)

9980 Water Street, Ephraim, WI

Free for registered guests, Available 24-hours a day.

2 Tesla Connectors, up to 16kW

Egg Harbor

[Carrington Pub & Grill](#)

4929 Landmark Dr, Egg Harbor, WI 54209

Free for guests and diners

EV Plug (J1772), Tesla (HPWC)

[The Donald and Carol Kress Pavilion](#)

7845 Church Street, Egg Harbor, WI 54209

Free to the public

2 - EV Plug (J1772), 2 - Tesla (HPWC)

[Ashbrooke Hotel](#)

7942 Egg Harbor Road, Egg Harbor, WI 54209

Free to guests. Non-guests can use charger for a donation to The Angel Fun at Gibraltar School.

2 - Tesla (HPWC), 1 - EV Plug (J1772)

Fish Creek

[Main Street Motel](#)

4209 Main St, Fish Creek, WI 54212

Open seasonally May through October.

Free for registered guests, Available 24-hours a day

Free for the public, 9am-5pm by appointment only, must register at the front desk

EV Plug (J1772) & Tesla charging station

[Town of Gibraltar \(Fish Creek Information Center\)](#)

4097 Hwy 42, Fish Creek WI 54212

Free, Available 24-hours a day

EV Plug (J1772)

Sister Bay

[The Dorr Hotel](#)

2329 Mill Rd, Sister Bay WI 54234

2 Tesla Stations

[Dovetail Acres Campground](#)

10282 Hwy 57, Sister Bay WI 54234

Nema14-40

[Open Hearth Lodge](#)

2669 S. Bay Shore Dr., Sister Bay WI 54234

EV Plug J1772

November 16 - January 31 Paid Parking

9AM-7PM

10 hours a day 7 Days/Week 78 Days \$2/hour

	PER STALL	1172 STALLS
100% Occupancy	\$ 1,560.00	\$ 1,828,320.00
75% Occupancy	\$ 1,170.00	\$ 1,371,240.00
50% Occupancy	\$ 780.00	\$ 914,160.00
25% Occupancy	\$ 390.00	\$ 457,080.00
10% Occupancy	\$ 156.00	\$ 182,832.00

November 1-November 14 Paid Parking

9AM-7PM

10 hours a day 7 Days/Week 14 Days \$2/hour

	PER STALL	1172 STALLS
100% Occupancy	\$ 280.00	\$ 328,160.00
Actual		\$ 58,568.00

28% of November 15 January 31 would be \$511,929.60

17.8% of November 15 January 31 would be \$325,440.96

15.5% of November 15 January 31 would be \$283,389.60

Additional Expenses

Parking Wages	\$ 28,350.00
Health	\$ 34,000.00
Dental	\$ 815.00
Vision	\$ 160.00
Life Ins	\$ 116.00
Retirement	\$ 5,500.00
Disability	\$ 143.00
Social Security	\$ 5,196.00
Kiosk Supplies	\$ 4,050.00
Workers Comp Ins	\$ 891.00
Enforcement Supplies	\$ 4,000.00

February 1 - November 14th Paid Parking

9AM-7PM

10 hours a day 7 Days/Week 287 Days \$2/hour

	PER STALL	1172 STALLS
100% Occupancy	\$ 5,740.00	\$ 6,727,280.00
75% Occupancy	\$ 4,305.00	\$ 5,045,460.00
50% Occupancy	\$ 2,870.00	\$ 3,363,640.00
25% Occupancy	\$ 1,435.00	\$ 1,681,820.00
10% Occupancy	\$ 574.00	\$ 672,728.00

February 1-February 28 Paid Parking

9AM-7PM

10 hours a day 7 Days/Week 28 Days \$2/hour

	PER STALL	1172 STALLS
100% Occupancy	\$ 560.00	\$ 656,320.00
Actual		\$ 102,239.00

If \$1,880,000 is our expected kiosk + app revenue,
then we average 28% occupancy.

Actual occupancy in November is 17.8%

Actual occupancy in February is 15.5%

Fuel	\$	400.00
Misc	\$	3,200.00
Rev Share	\$	9,700.00
Total add'l Expense	\$	96,521.00

To: Tom Earle, Director of Public Works
City of Lake Geneva

From: John Jenkins, PE
MSA Professional Services, Inc.

Subject: 2022 Street Improvement Program: Updates

Date: February 24, 2022

Attached are the updated plans for the 'first phase' of the 2022 Street Improvements project. This includes Campbell Street from South Lake Shore Drive to South Wells Street, Sky Lane Drive from West Main Street to and including the Linda Lane intersection, Henry Street from Madison Street to Williams Street, and Spring Street from Crawford Street to Waverly Street. These roads will have spot curb replacements, mill and overlay the surface pavement with excavation of soft areas as needed, and sidewalk spot repairs including curb ramp improvements. We also include the alley between Sage Street and Center Street, from Water Street to Dodge Street, and the alley between Main Street and Darwin Street from West Street to East Street. These alleys will be pulverized into the base course, soft spots excavated as needed, graded and crowned, and repaved.

In addition to the street improvements, we have added at your request repair and replacement of the sidewalk and ramps at the following three locations:

1. The southeast quadrant of the Main St/West St intersection
2. The west side of mid-block on Broad Street, near Bruno's Liquors
3. Both sides of Broad Street at the mid-block alley, near Lake Geneva Regional news (west side) and Horticultural Hall (east side)

There are two curb ramp replacements where we cannot meet the maximum grade recommended. These are on the west side of Broad Street near the entrance to Bruno's Liquors and on the southeast side of the Main Street / West Street intersection. The ramp on Broad Street has a slope of 9.0% which is higher than the 8% requirement. In order to achieve the lower slope and not exceed the resulting cross slope, most of the frontage of the property would have to have the walk replaced and likely a step into the building would be required. With the intent of fixing the driveway and walk, we recommend improving the ramp and driveway as proposed. The ramp at Main and West Street has difficult cross slopes creating a drainage problem where water running west in the curb runs into the curb ramp and then to West Street. To adjust this ramp to the recommended grades would increase the drainage issue. We propose to move the sidewalk crossing to the west side of West Street, eliminating the north crossing on the east side of the Main

MEMO

February 24, 2022

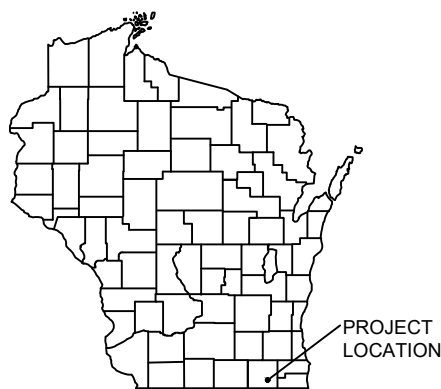
Street. This allows the recommended slopes on all the proposed ramps (both sides of Main Street and both sides of West Street) and eliminates the drainage problem on the north ramp of the southeast corner.

I am currently working on the assessment report for the sidewalk replacements. There are multiple segments of walk to be replaced that are eligible to be assessed due to heaving beyond what grinding of joints would allow or being cracked sufficiently to need replacement. Per your direction, those segments that are heaved or broken due to tree roots are not to be assessed, and curb ramps are not either.

We will continue to work on the Pine Tree Lane / Mariane Terrace and the Cook Street / Wrigley Drive plans for bidding in the summer with fall construction expected. This is the 'Phase 2' part of the 2022 Street Improvements.

2022 STREET IMPROVEMENTS - PHASE 1

CITY OF LAKE GENEVA WALWORTH COUNTY, WISCONSIN



SHEET INDEX

G - GENERAL SHEETS

G 1	TITLE SHEET
G 2-8	DETAILS
TYP 1-3	TYPICAL SECTIONS

P - ROAD CONSTRUCTION PLANS

P 1-10	CONSTRUCTION PLANS
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LEGEND

	EXISTING WATER MAIN
	EXISTING WATER MAIN, VALVE & HYDRANT
	EXISTING WATER SERVICE & CURB STOP
	PROPOSED WATER MAIN, VALVE, & HYDRANT
	PROPOSED WATER SERVICE & CURB STOP
	EXISTING SANITARY SEWER & MANHOLE
	PROPOSED SANITARY SEWER & MANHOLE
	EXISTING FORCEMAIN
	EXISTING STORM SEWER & INLET
	PROPOSED STORM SEWER & INLET
	PROPOSED STORM SEWER & MANHOLE
	BURIED ELECTRIC
	BURIED GAS & VALVE
	BURIED CABLE TELEVISION
	BURIED TELEPHONE
	BURIED FIBER OPTICS
	OVERHEAD UTILITY
	RAILROAD TRACKS
	EXISTING CURB & GUTTER
	PROPOSED CURB & GUTTER
	EXISTING SIDEWALK
	PROPOSED SIDEWALK
	EXISTING CULVERT PIPE
	PROPOSED CULVERT PIPE
	FENCE LINE
	DRAINAGE ARROW
	SILT FENCE
	RIGHT-OF-WAY
	BASELINE
	PROPERTY LINE
	TREE LINE
	BENCHMARK
	IRON PIPE
	IRON ROD
	CONTROL POINT
	UTILITY POLE & GUY
	SOIL BORING
	LIGHT POLE
	PEDESTAL
	STREET SIGN
	MAILBOX
	FLAGPOLE
	TREE - DECIDUOUS
	TREE - CONIFEROUS
	TREE TO BE REMOVED

UTILITIES

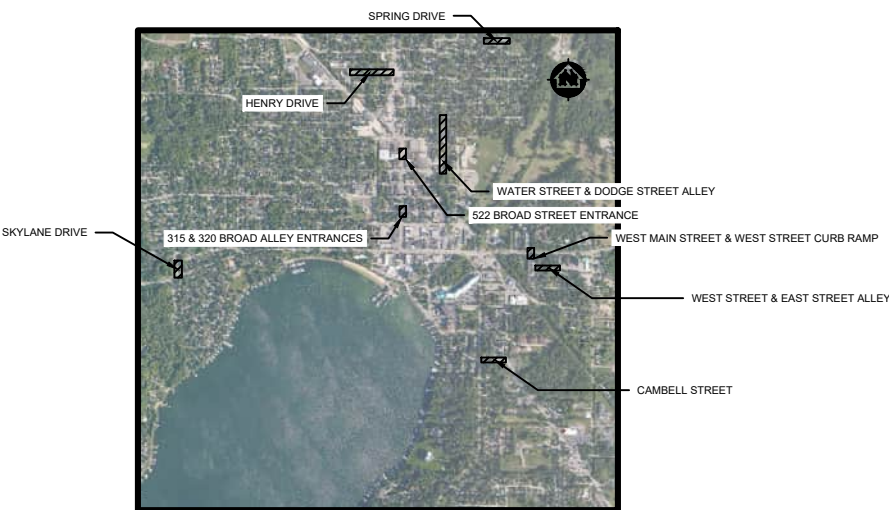
VILLAGE OF PARDEEVILLE
LAKE GENEVA PUBLIC WORKS DEPARTMENT
TOM EARLE, DIRECTOR OF PUBLIC WORKS
1065 CAREY STREET
LAKE GENEVA, WI 53147
PHONE: (262) 248-6644
EMAIL: TEARLE@CITYOFLAKEGENEVA.COM

SEWER & WATER
LAKE GENEVA UTILITY COMMISSION
JOSH GAJEWSKI, UTILITY COMMISSION DIRECTOR
P.O. BOX 187
361 MAIN STREET
LAKE GENEVA, WI 53147
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GAS:
WE ENERGIES
BRIAN BARTELS, GAS OPERATIONS SUPERVISOR
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SUN PRAIRIE, WI 53590
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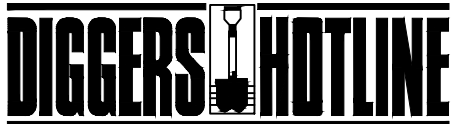
ELECTRIC:
ALLIANT ENERGIES
AUSTIN KROHN
1870 HAYNES DRIVE, SUN PRAIRIE, WI 53590
EMAIL: AUSTINKROHN@ALLIANTENERGY.COM
PHONE: (262) 741-0905

CATV:
CHARTER (TIME WARNER CABLE LEGACY)
BEAU ABUYA
EMAIL: BEAU.ABUYA@CHARTER.COM
PHONE: (414) 908-1343



LOCATION MAP

NOT TO SCALE



Dial **811** or (800) 242-8511
www.DiggersHotline.com

NOTE:
UTILITY LOCATIONS SHOWN ON PLANS ARE APPROXIMATE AND CONTRACTOR
SHALL HAVE APPROPRIATE UTILITY MARK EXACT LOCATIONS PRIOR TO
CONSTRUCTION.

PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ	-	-	-	-

PLOT DATE: 2/23/2022 1:30 PM, G:\19\19995\19995004\CADD\Construction Documents\19995004 Title.dwg

ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1702 Pankratz St Madison, WI 53704
(608) 242-7779 www.msa-ps.com
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2022 STREET IMPROVEMENTS - PHASE 1
CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

TITLE	PROJECT NO.
	19995004
	SHEET
	G1

1. SECTION NR216.46 OF THE WISCONSIN STATE ADMINISTRATIVE CODE IDENTIFIES REQUIREMENTS FOR CONSTRUCTION SITE AND POST-CONSTRUCTION EROSION CONTROL. IT IS THE INTENT OF THESE PLANS TO SATISFY THESE REQUIREMENTS. THE METHODS AND STRUCTURES USED TO CONTROL EROSION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL IMPLEMENT AN APPROPRIATE MEANS OF CONTROLLING EROSION DURING SITE OPERATION AND UNTIL THE VEGETATION IS RE-ESTABLISHED. ADJUSTMENTS TO THE CONTROL SYSTEM SHALL BE MADE AS REQUIRED.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE WISCONSIN DNR'S CONSERVATION PRACTICE STANDARDS. THESE STANDARDS ARE PERIODICALLY UPDATED AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND REFERENCE THE MOST RECENTLY RELEASED STANDARD.
3. THIS INFORMATION IS ONLY ONE PART OF THE OVERALL EROSION CONTROL REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY ALSO BE SHOWN ON THE CONTRACT DRAWINGS AND IN THE ACCOMPANYING SPECIFICATIONS.
4. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE OWNER'S ENGINEER, SHALL BE INSTALLED WITHIN 24 HOURS.
5. THE AREA OF EROSION LAND EXPOSED TO THE ELEMENTS BY GRUBBING, EXCAVATION, TRENCHING, BORROW AND FILL OPERATIONS AT ANY ONE TIME SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. FOR ANY DISTURBED AREA THAT REMAINS INACTIVE FOR GREATER THAN 7 WORKING DAYS, OR WHERE GRADING WORK EXTENDS BEYOND THE PERMANENT SEEDING DEADLINES, THE SITE MUST BE TREATED WITH TEMPORARY STABILIZATION MEASURES SUCH AS SOIL TREATMENT, TEMPORARY SEEDING AND/OR MULCHING. ALL DISTURBED AREAS SHALL BE TREATED WITH PERMANENT STABILIZATION MEASURES WITHIN 3 WORKING DAYS OF FINAL GRADING.
6. ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY OR WITHIN 24 HOURS OF THE TIME 0.5 INCHES OF RAIN HAS OCCURRED. ALL NECESSARY REPAIR AND MAINTENANCE WILL BE DONE AT THIS INSPECTION TIME.
7. ALL EROSION CONTROL DEVICES AND/OR STRUCTURES SHALL BE PROPERLY INSTALLED PRIOR TO CLEARING AND GRUBBING OPERATIONS WITHIN THEIR RESPECTIVE DRAINAGE AREAS. THESE SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS RE-ESTABLISHED.
8. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY INSTALLED PRIOR TO ANY SOIL DISTURBANCE.
9. ANY SLOPES STEEPER THAN 3H:1V SHALL BE STAKED WITH EROSION CONTROL FABRIC UNLESS INDICATED ON THE PLAN.
10. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED OF AND NOT ALLOWED TO BE CARRIED OFF-SITE BY RUNOFF OR WIND.
11. WIND EROSION SHALL BE KEPT TO A MINIMUM DURING CONSTRUCTION. WATERING, MULCH, OR A TACKING AGENT MAY BE REQUIRED TO PROTECT NEARBY RESIDENCES AND WATER RESOURCES.
12. CHANNELIZED RUNOFF ENTERING THE PROJECT SITE FROM ADJOINING LANDS SHALL BE DIVERTED THROUGH NATURALLY OR ARTIFICIALLY EROSION-RESISTANT CONVEYANCES. IF CHANNELIZED RUNOFF CANNOT BE DIVERTED, SITE BEST MANAGEMENT PRACTICES MUST ACCOUNT FOR THE ADDITIONAL FLOW RATES AND EROSION POTENTIAL THAT SUCH RUNOFF PRESENTS.
13. THE CONTRACTOR SHALL TAKE ALL POSSIBLE PRECAUTIONS TO PREVENT SOILS FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. PAVED SURFACES ADJACENT TO CONSTRUCTION SITE VEHICLE ACCESS SHALL BE SWEEP AND/OR SCRAPPED (NOT FLUSHED) PERIODICALLY TO REMOVE SOIL, DIRT, AND/OR DUST.
14. EROSION CONTROLS SHALL BE INSTALLED ON THE DOWNSTREAM SIDE OF TEMPORARY STOCKPILES. ANY SOIL STOCKPILE THAT REMAINS FOR MORE THAN 30 DAYS SHALL BE COVERED OR TREATED WITH STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING. ALL STOCK PILES SHALL BE PLACED AT LEAST 75 FEET FROM STREAMS OR WETLANDS.
15. ADDITIONAL EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, SANITARY SEWER, WATER MAIN, ETC.) SHALL INCLUDE THE FOLLOWING:
 - a. PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
 - b. BACKFILL, COMPACT, AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
 - c. DISCHARGE OF TRENCH WATER OR DEWATERING EFFLUENT MUST BE PROPERLY TREATED TO REMOVE SEDIMENT IN ACCORDANCE WITH THE WDNR CONSERVATION PRACTICE STANDARD 1061 - DEWATERING OR A SUBSEQUENT WDNR DEWATERING STANDARD PRIOR TO DISCHARGE INTO A STORM SEWER, DITCH, DRAINAGEWAY, OR WETLAND OR LAKE.
16. ALL DRAINAGE CULVERTS, STORM DRAIN INLETS, MANHOLES, OR ANY OTHER EXISTING STRUCTURES THAT COULD BE DAMAGED BY SEDIMENTATION SHALL BE PROTECTED ACCORDING TO THE VARIOUS METHODS PROVIDED IN THE PRINTED CONSERVATION PRACTICE STANDARDS.
17. ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR STABILIZATION MUST BE REPAIRED AND THE STABILIZATION WORK REDONE.
18. THE FIRST SIX WEEKS AFTER INITIAL STABILIZATION, ALL NEWLY SEEDDED AND MULCHED AREAS SHALL WATERED WHENEVER 7 DAYS ELAPSE WITHOUT A RAIN EVENT.
19. WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS, TEMPORARY BMP'S SUCH AS SILT FENCES, STRAW BALES, AND SEDIMENT TRAPS SHALL BE REMOVED AND THESE AREAS STABILIZED.
20. ALL TEMPORARY BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED UNTIL THE SITE IS STABILIZED.
21. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED WITH SEED AND MULCH UNLESS OTHERWISE SPECIFIED. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE APPLIED TO ALL AREAS TO BE SEEDDED OR SODDED.

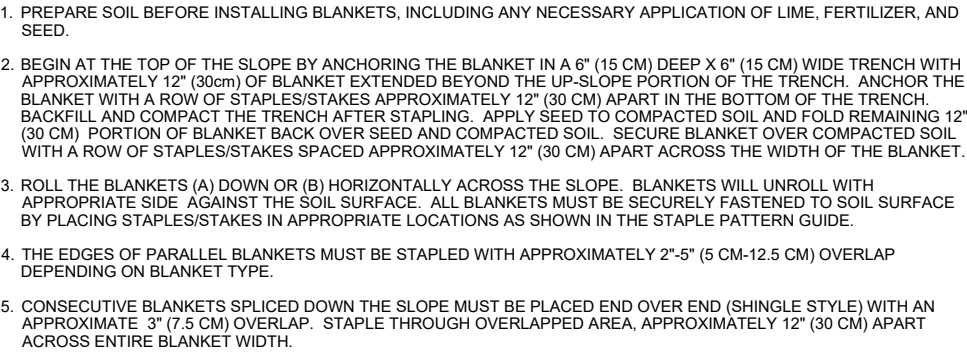


SIEVE SIZE	% PASSING
3"	100%
2 1/2"	90 - 100%
1 1/2"	25 - 60%
3/4"	0 - 20%
3/8"	0 - 5%

NOTES:

1. TRACKING PAD WIDTH SHALL BE AT LEAST THE FULL WIDTH OF HTE EGRESS POINT OR 12' WIDE MINIMUM.
2. TRACKING PAD LENGTH SHALL BE 50' FOR CONSTRUCTION SITES, 30' FOR SINGLE FAMILY RESIDENTIAL, OR AS SPECIFIED IN THE CONTRACT DOCUMENTS. LENGTH OF TRACKING PAD MAY NEED TO BE INCREASE OR ADDITIONAL SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED BY THE CONTRACTOR IF SEDIMENT TRACKING OCCURS.
3. CATCH BASIN TYPE FENCE SHALL BE INSTALLED BETWEEN THE STONE AND SUBGRADE ON SITES WHERE HIGH GROUND WATER IS OBSERVED.
4. CONTRACTOR SHALL CLEAN STREET/ROADWAY ADJACENT TO ALL CONSTRUCTION ACCESS POINTS AT THE END OF EACH WORKDAY OR MORE FREQUENTLY IF REQUESTED.

NO SCALE



NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

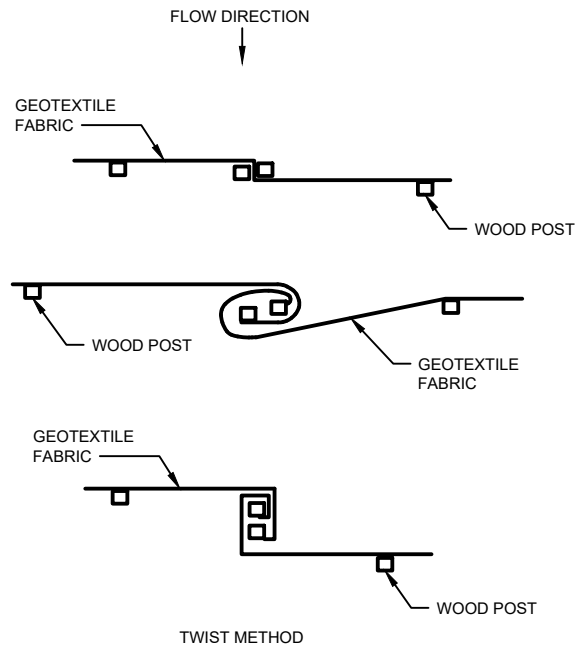
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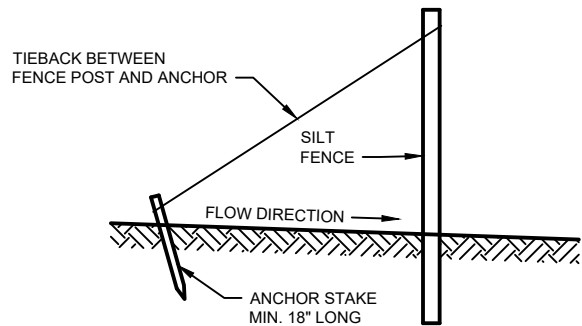
- 
- ① DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.
- ② TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.
- ③ THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

NO SCALE

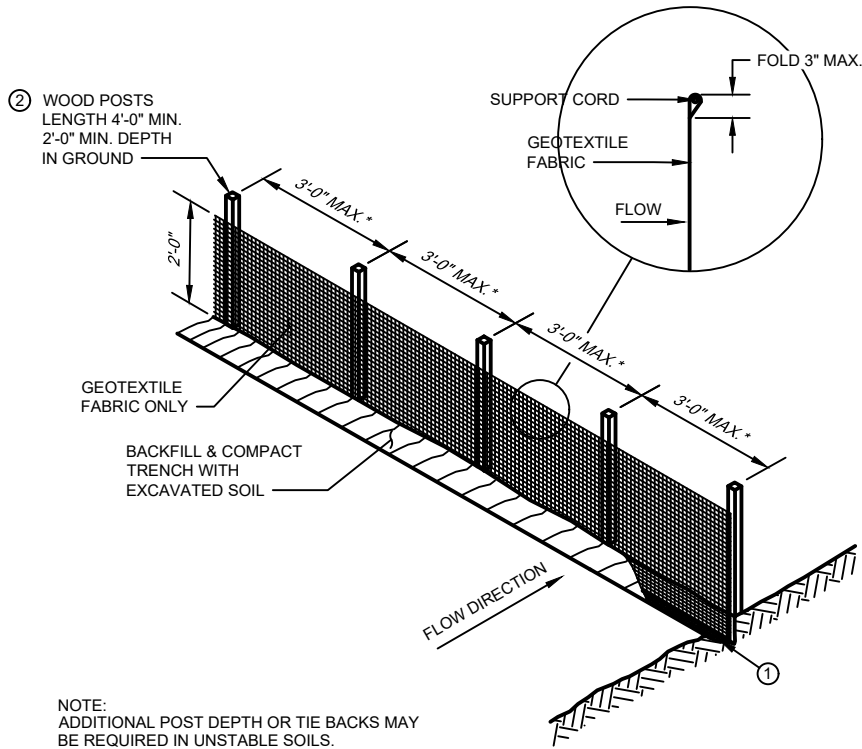
CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE



JOINING TWO LENGTHS OF SILT FENCE ③



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)



NOTE:
ADDITIONAL POST DEPTH OR TIE BACKS MAY
BE REQUIRED IN UNSTABLE SOILS.

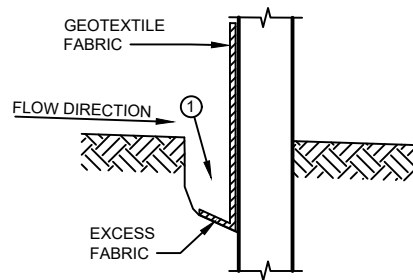
* 8'-0" POST SPACING ALLOWED IF A WOVEN
GEOTEXTILE FABRIC IS USED, OR IF THE SILT
FENCE IS FACTORY ASSEMBLED.

ATTACH THE FABRIC TO THE POSTS WITH
WIRE STAPLES OR WOODEN LATH AND NAILS.

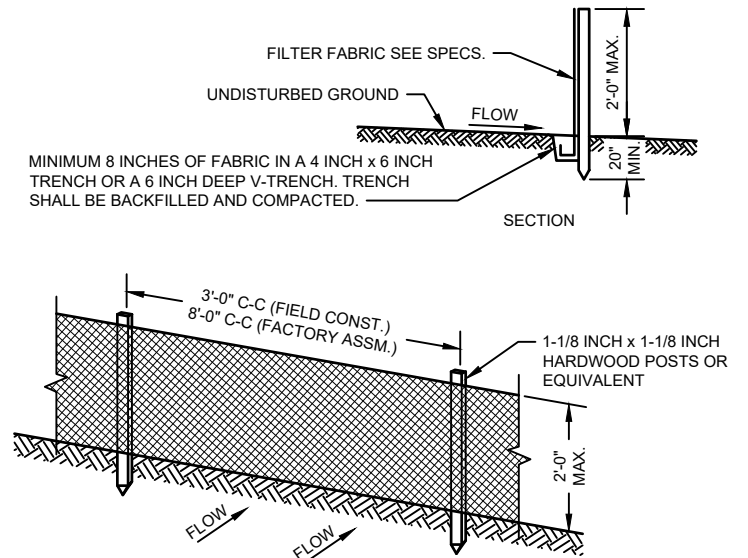
SILT FENCE

GENERAL NOTES

1. TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
2. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" x 1 1/8" OF OAK OR HICKORY.
3. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A) TWIST METHOD -- OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK METHOD -- HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL

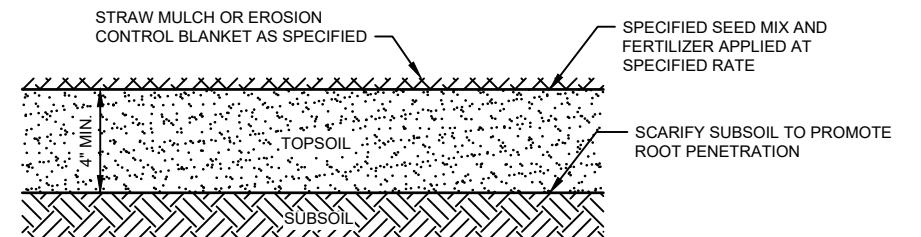


PERSPECTIVE VIEW

GENERAL NOTES:

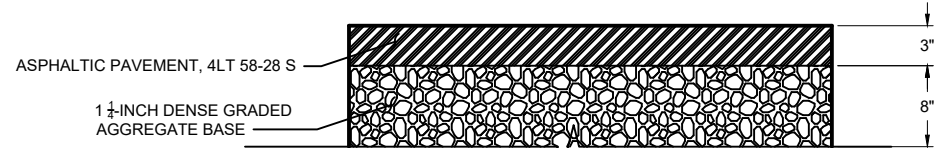
1. ENDS OF FENCE SHALL BE TURNED UPSLOPE 1 TO 2 FEET IN ELEVATION TO PREVENT FLANKING.
2. STAPLE FABRIC WITH 1/2 INCH (MINIMUM) STAPLES TO THE UPSLOPE SIDE OF THE POSTS.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.

TYPICAL SILT FENCE INSTALLATION AT SITE PERIMETER DETAIL
NO SCALE

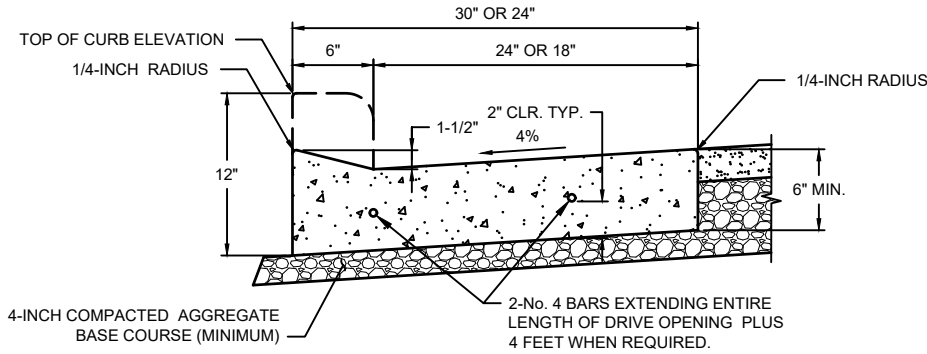


NOTE: WHERE REQUIRED, PLANT HERBACEOUS PLUGS
ACCORDING TO PLAN, OR AS DIRECTED BY ENGINEER.

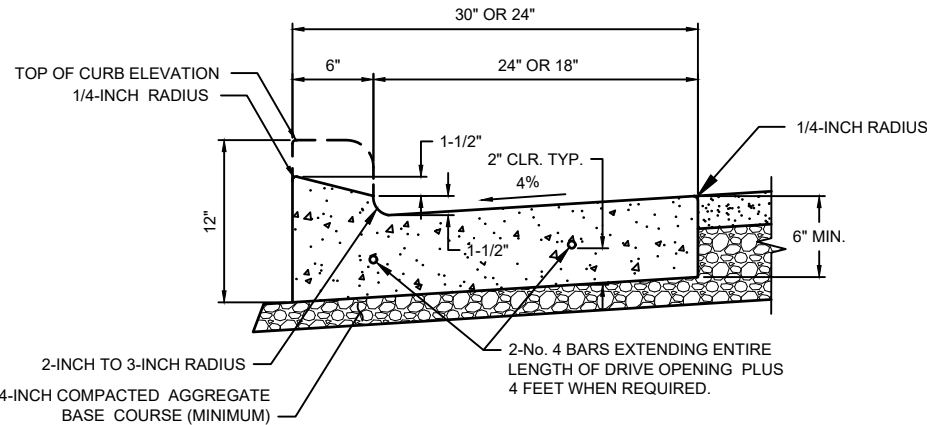
TOPSOIL AND SEEDING DETAIL
NO SCALE



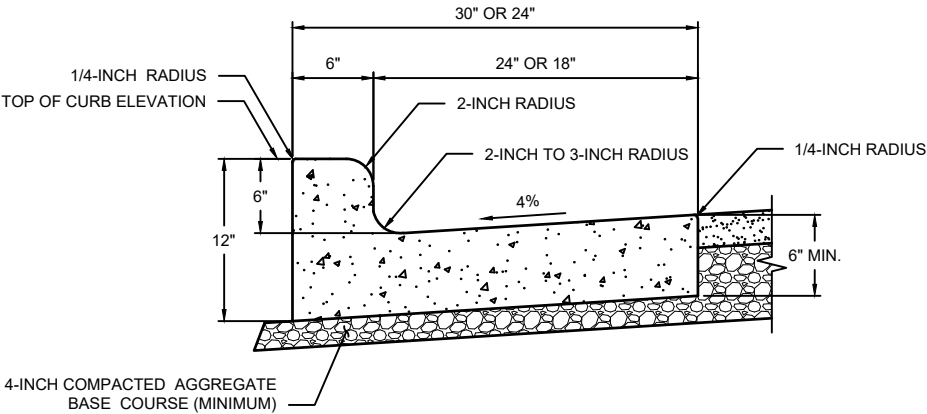
ASPHALT DRIVE DETAIL
NO SCALE



DRIVEWAY SECTION



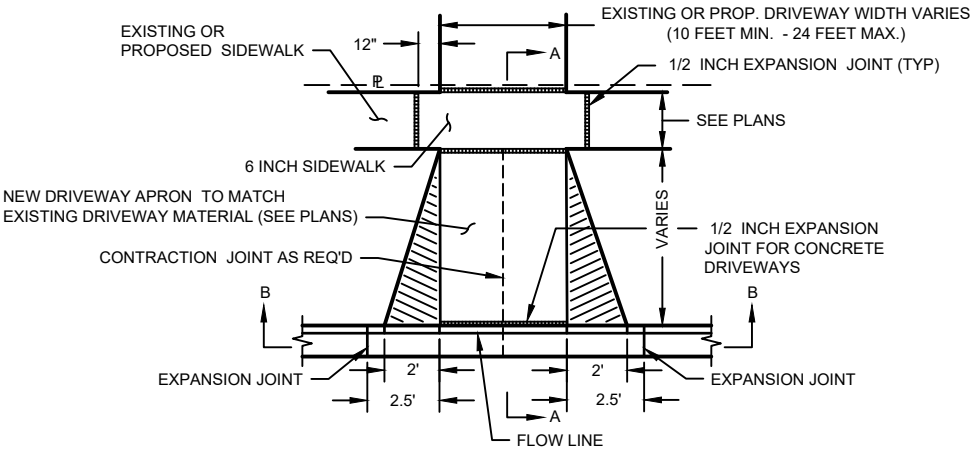
SPECIAL DRIVEWAY SECTION



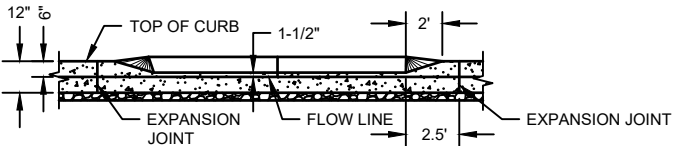
STANDARD SECTION

TYPE L CURB AND GUTTER DETAIL
NO SCALE

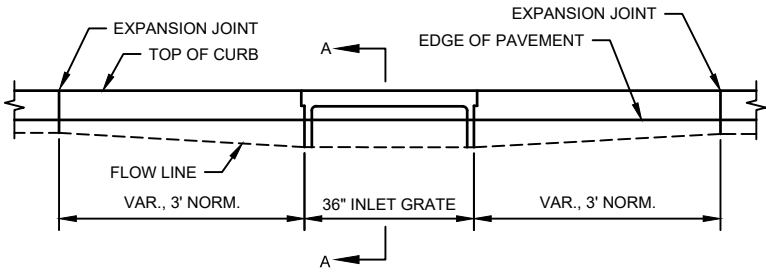
NOTE TO SPECIFIER: DELETE REINFORCEMENT IF NOT REQUIRED, OR
VERIFY THAT REINFORCEMENT IS CALLED OUT IN PLANS/SPECS



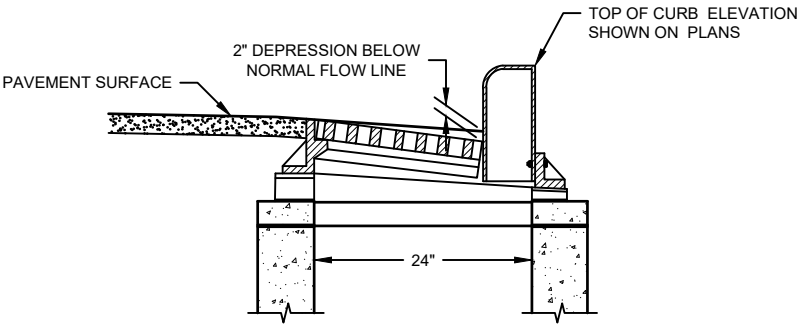
SECTION A-A



SECTION B-B
DRIVEWAY DETAIL
NO SCALE



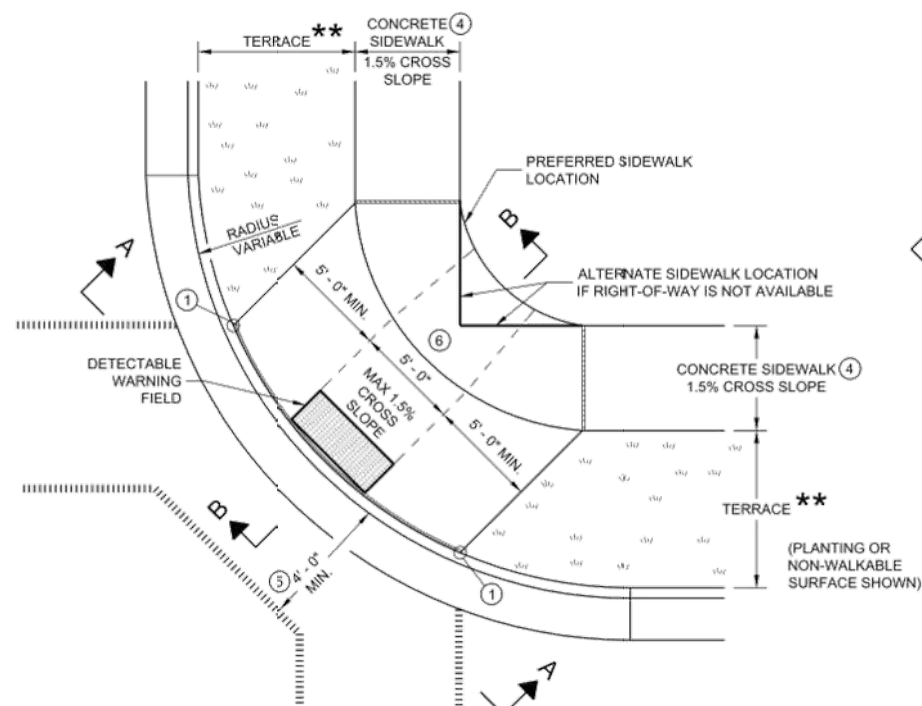
SECTION A-A



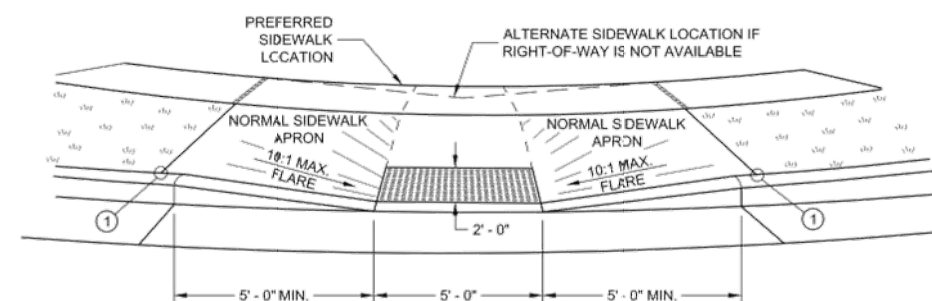
CURB AND GUTTER AT INLETS DETAIL
NO SCALE



SDD 08D05-a: Curb Ramps Types 1 and 1-A

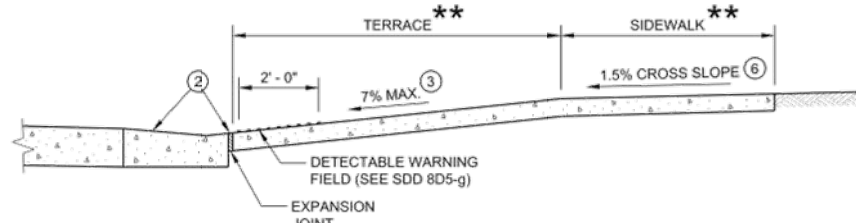


PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)

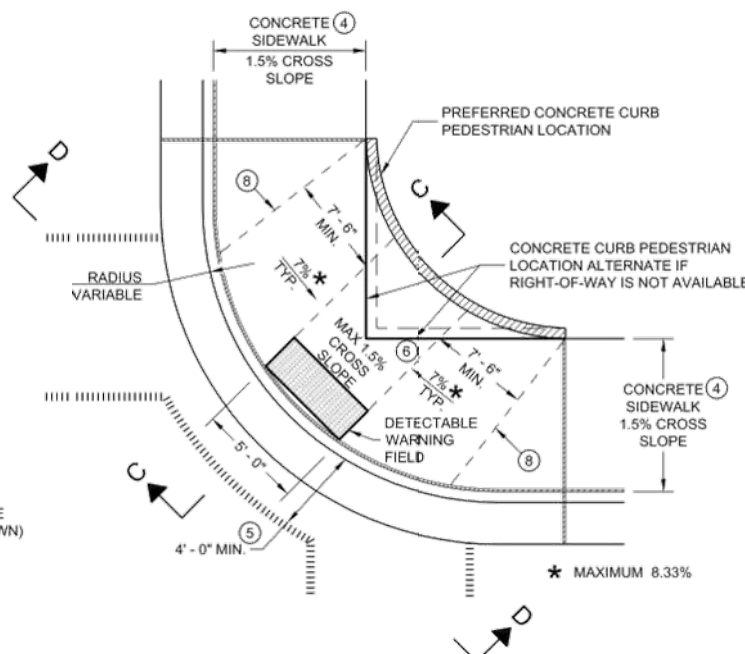


VIEW A - A FOR TYPE 1

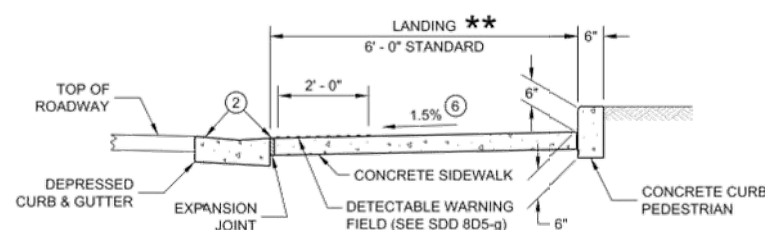
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



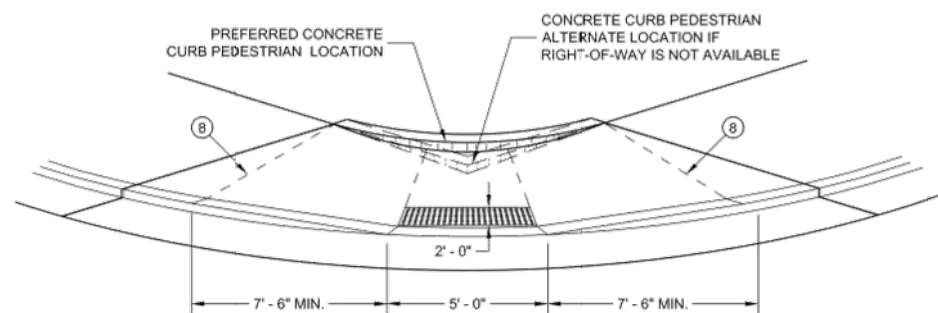
SECTION B - B FOR TYPE 1



PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMP SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

- THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

- EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

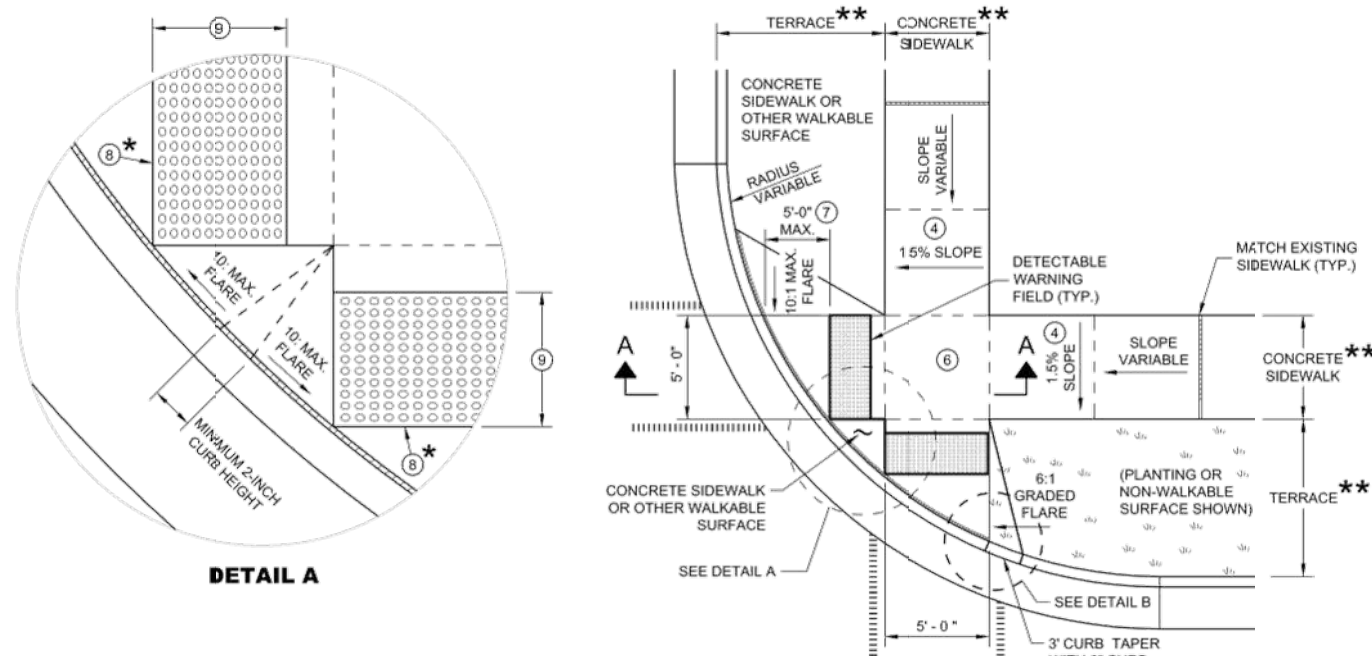
CURB RAMP TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20a

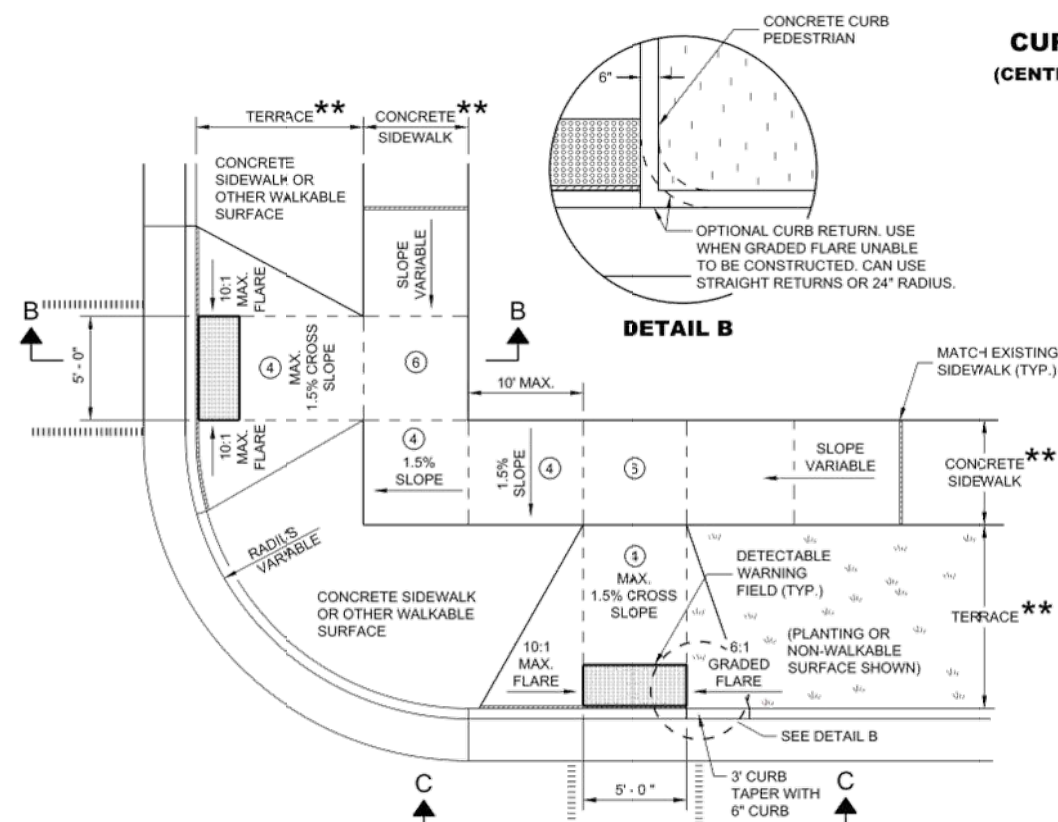


SDD 08D05-b Curb Ramps Types 2 and 3

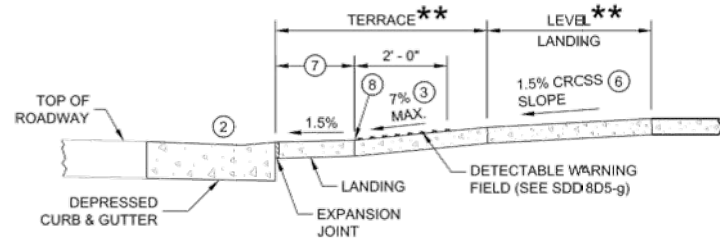


DETAIL A

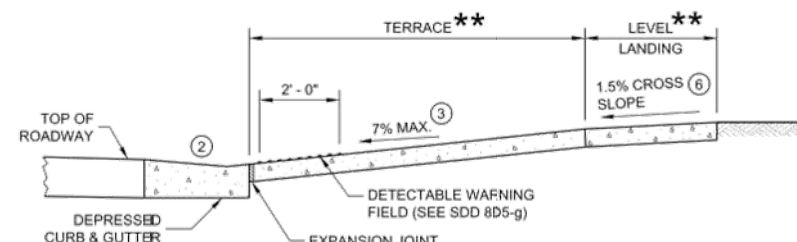
PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)



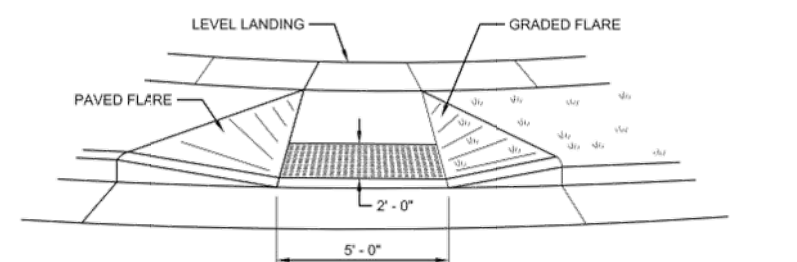
PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



SECTION A - A FOR TYPE 2



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE
IN THE PLANS

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 08D05 - 20b

SDD 08D05 - 20b

PROJECT DATE:	DRAWN BY: MJW	DATE: 2/23/2022	DESIGNED BY: JJJ	CHECKED BY: JJJ
PLOT DATE: Wednesday, February 23, 2022 1:30:45 PM, G:\19\19995\19995004\CADD\Construction Documents\19995004 Details.dwg				

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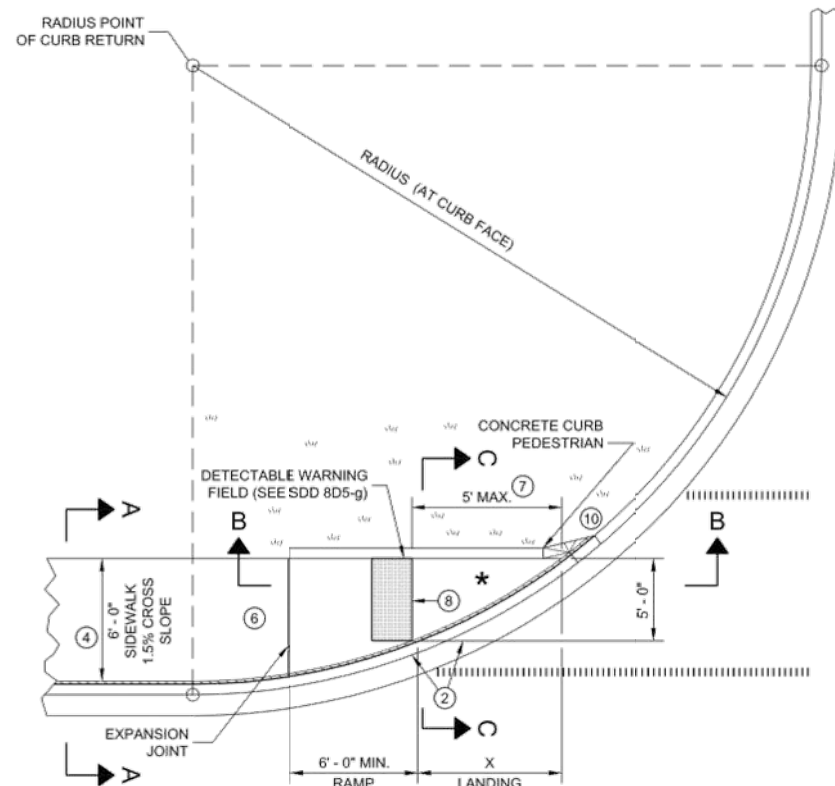
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CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

DETAILS

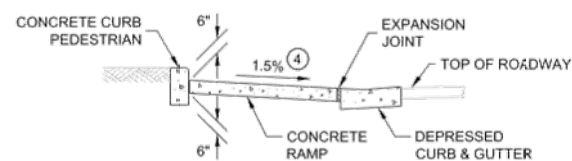
PROJECT NO.
19995004
SHEET
G6



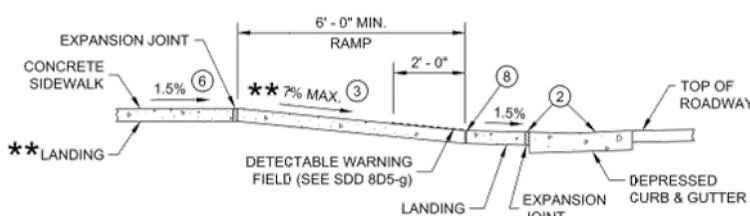
SDD 08D05-c Curb Ramps Types 4A and 4A1



PLAN VIEW
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A



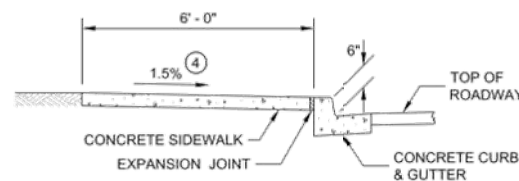
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B - B FOR
TYPE 4A AND TYPE 4A1

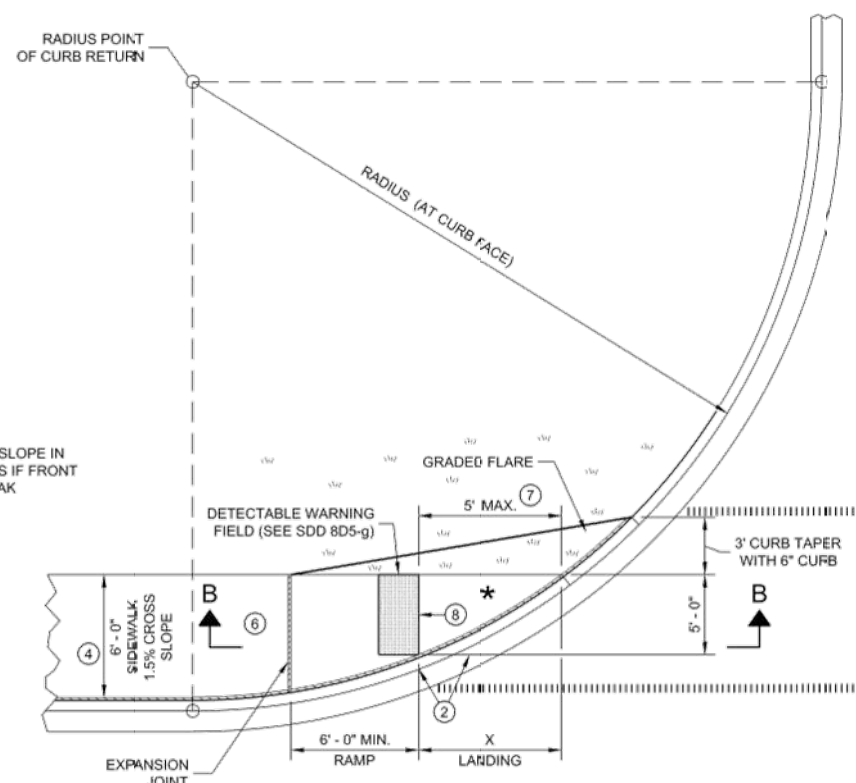
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A



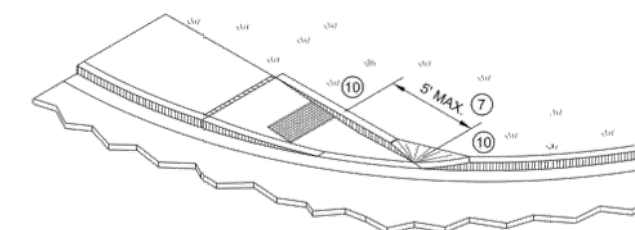
PLAN VIEW
CURB RAMP TYPE 4A1

GENERAL NOTES

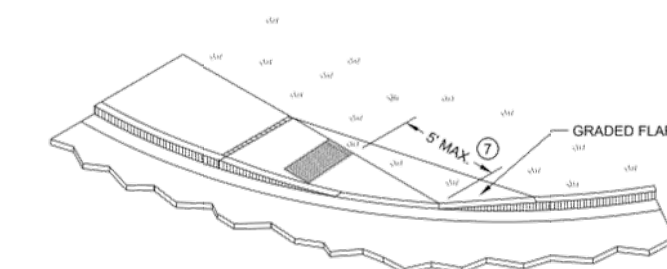
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/2 INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- 7 WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 10 INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PROJECT DATE:	DRAWN BY: MJW	DATE: 2/23/2022
DESIGNED BY: JJJ	CHECKED BY: JJJ	DATE: 2/23/2022

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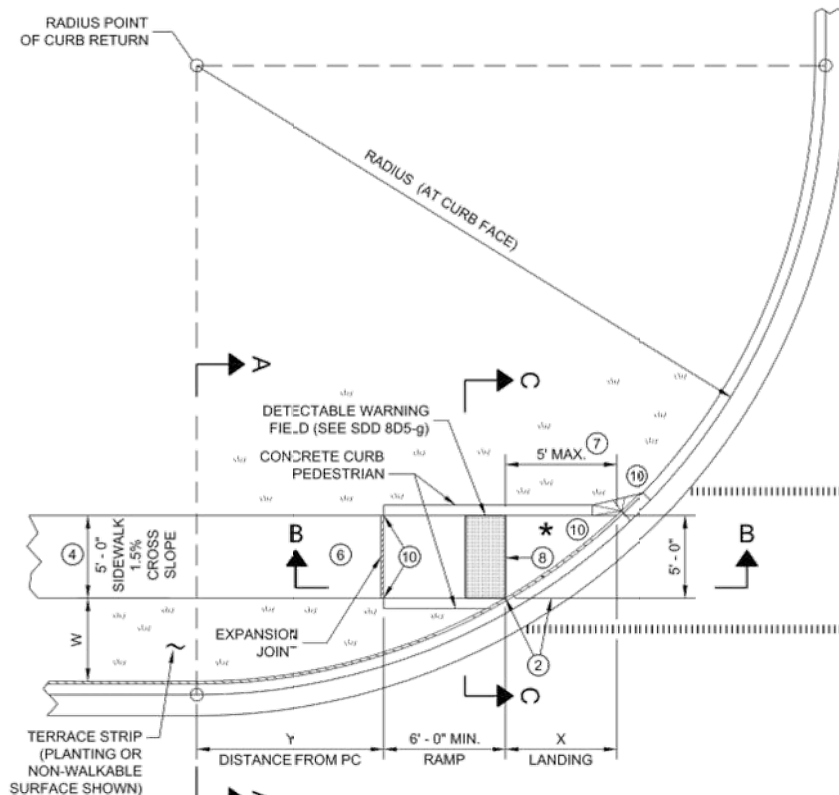
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WALWORTH COUNTY, WISCONSIN

DETAILS

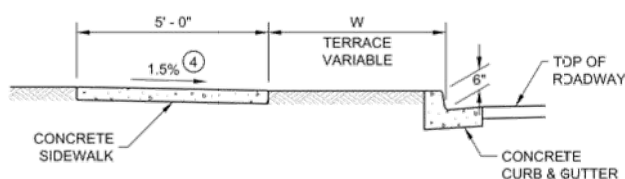
PROJECT NO:
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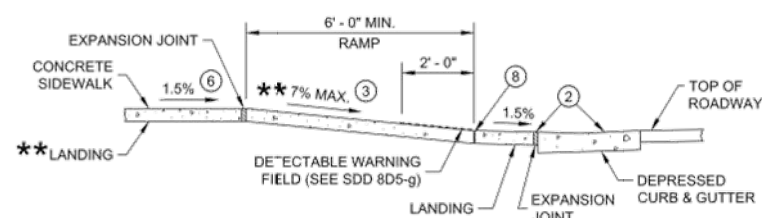
SDD 08D05-d: Curb Ramps Types 4B and 4B1



PLAN VIEW
CURB RAMP TYPE 4B



SECTION A - A FOR TYPE 4B

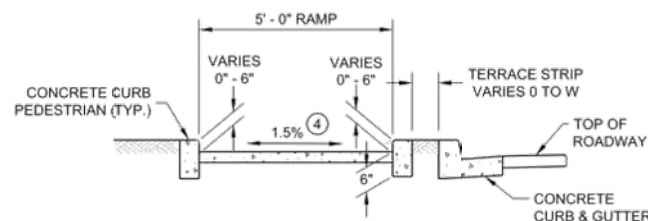


SECTION B - B FOR
TYPE 4B AND TYPE 4B1

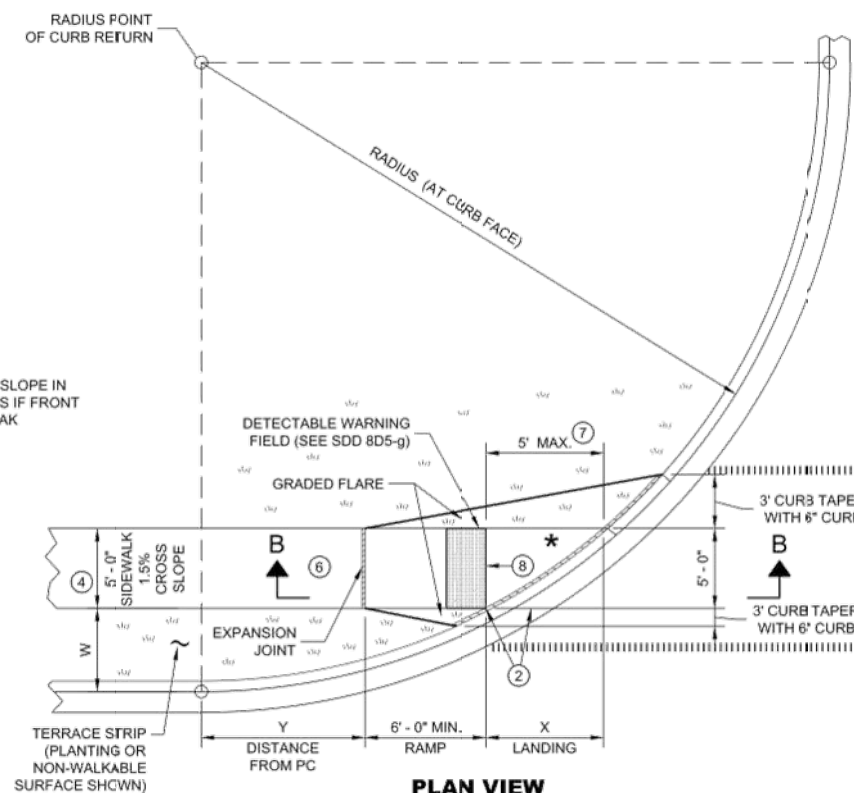
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/2"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 1/2"	3' - 0 1/2"						
15 FEET	4' - 6 1/2"	2' - 1 1/2"	3' - 9"	3' - 5 1/2"	3' - 1 1/2"	4' - 6"	2' - 6 1/2"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/2"	7' - 2 1/2"	0' - 10 1/2"	7' - 7 1/2"
20 FEET	5' - 9 1/2"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 1/2"	4' - 3 1/2"	6' - 5 1/2"	3' - 8 1/2"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/2"	2' - 1 1/2"	10' - 9"
30 FEET			6' - 9 1/2"	7' - 11 1/4"	5' - 0 1/2"	9' - 8"	5' - 5"	11' - 1 1/4"	4' - 10 1/4"	12' - 5 1/4"	4' - 5 1/2"	13' - 7 1/2"	4' - 0 1/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/2"
40 FEET									6' - 1 1/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 1/4"	4' - 10 1/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

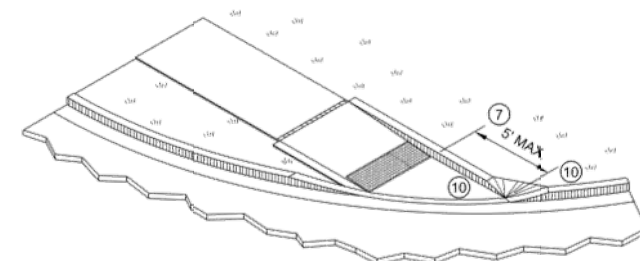
INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



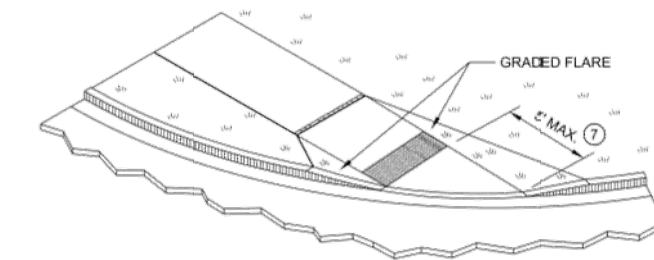
SECTION C - C FOR TYPE 4B



PLAN VIEW
CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET 3Y 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 08D05 - 20d

SDD 08D05 - 20d

PROJECT DATE:	DRAWN BY: MJW	DATE: 2/23/2022
DESIGNED BY: JLJ	CHECKED BY: JLJ	

PRELIMINARY

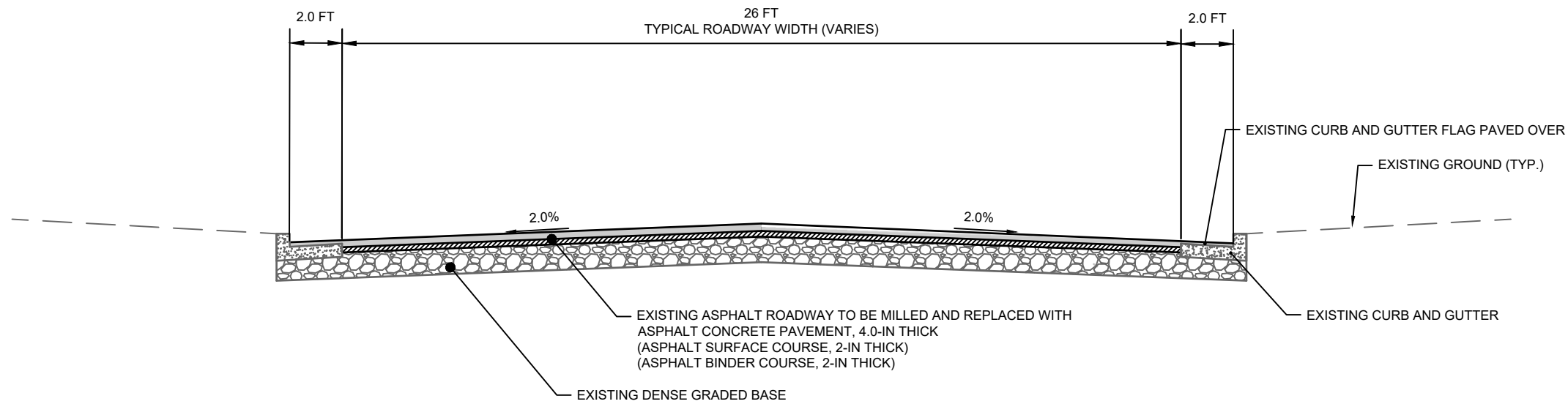


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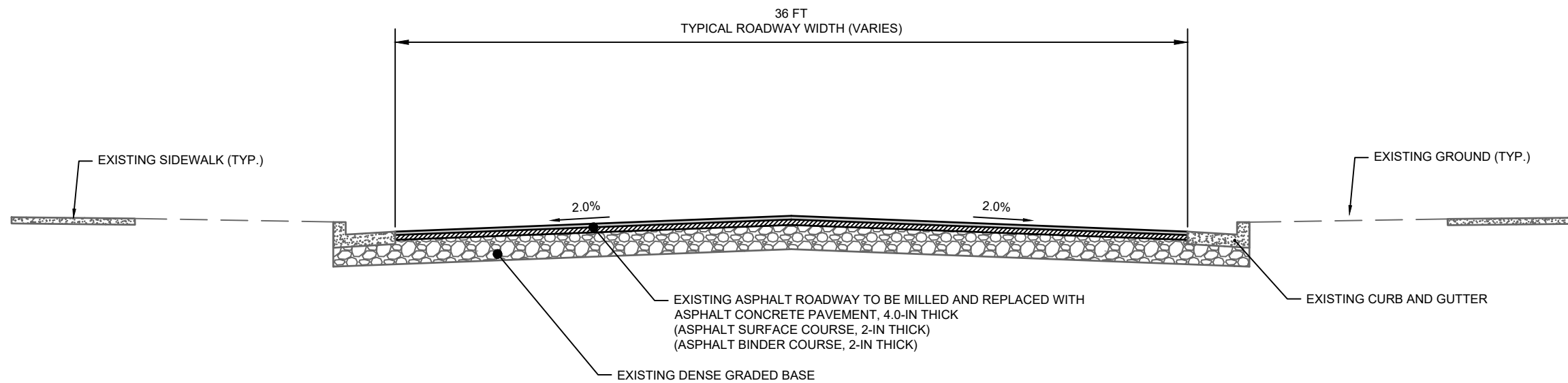
2022 STREET IMPROVEMENTS - PHASE 1
CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

DETAILS

PROJECT NO:
19995004
SHEET
G8



TYPICAL SECTION
SKYLANE DRIVE NTS



TYPICAL SECTION
HENRY STREET NTS

PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ	-	-	-	-

PLOT DATE: 2/23/2022 1:31 PM, G:\19\19995\19995004\CADD\Construction Documents\19995004 Typical Sections.dwg

PRELIMINARY

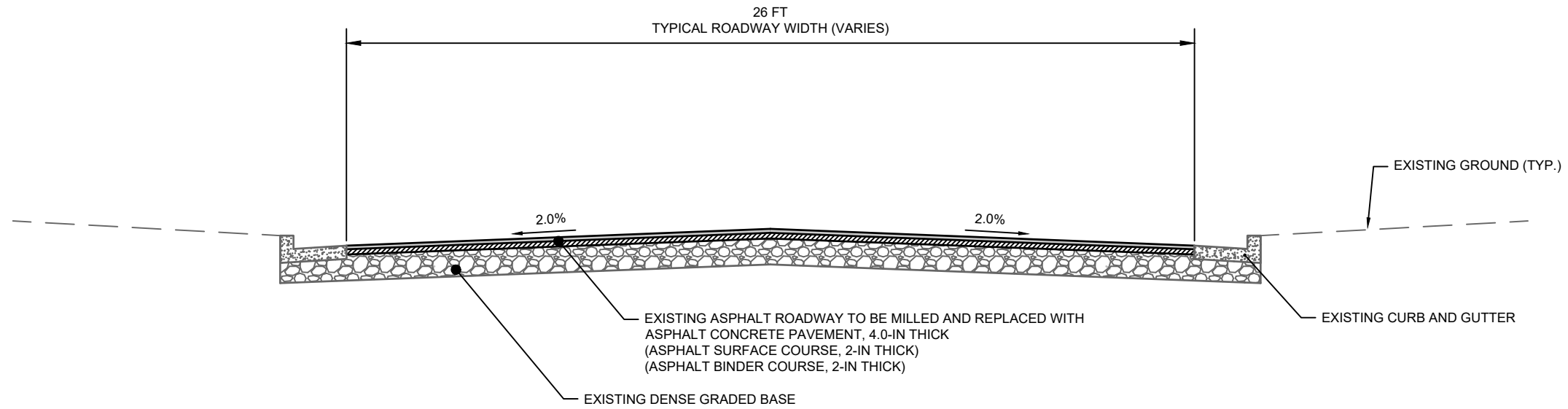


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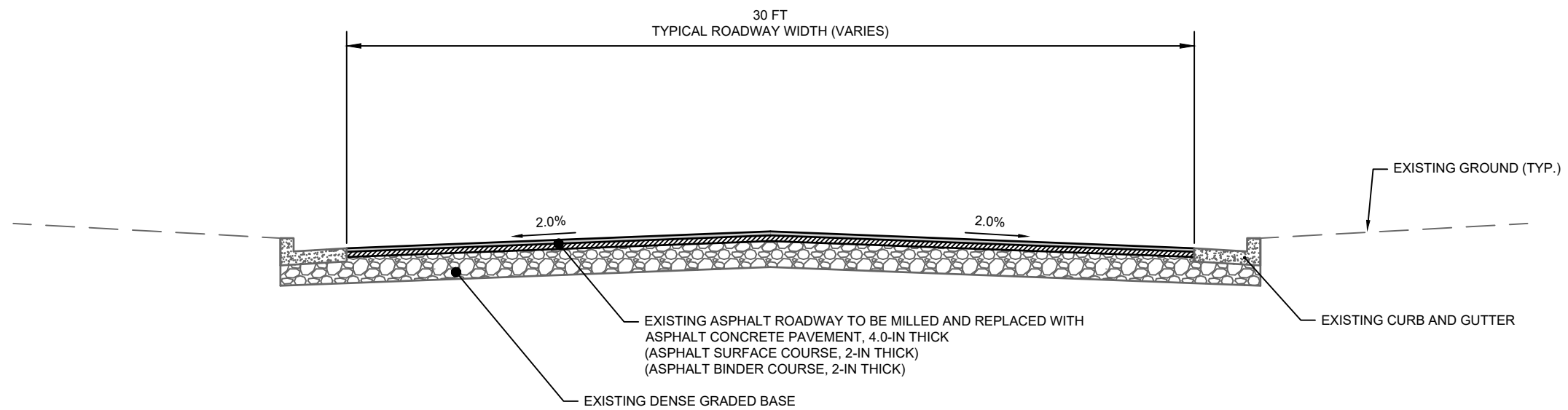
2022 STREET IMPROVEMENTS - PHASE 1
CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

TYPICAL SECTIONS

PROJECT NO:
19995004
SHEET
TYP1



TYPICAL SECTION
SPRING STREET NTS



TYPICAL SECTION
CAMBELL STREET NTS

PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ	-	-	-	-

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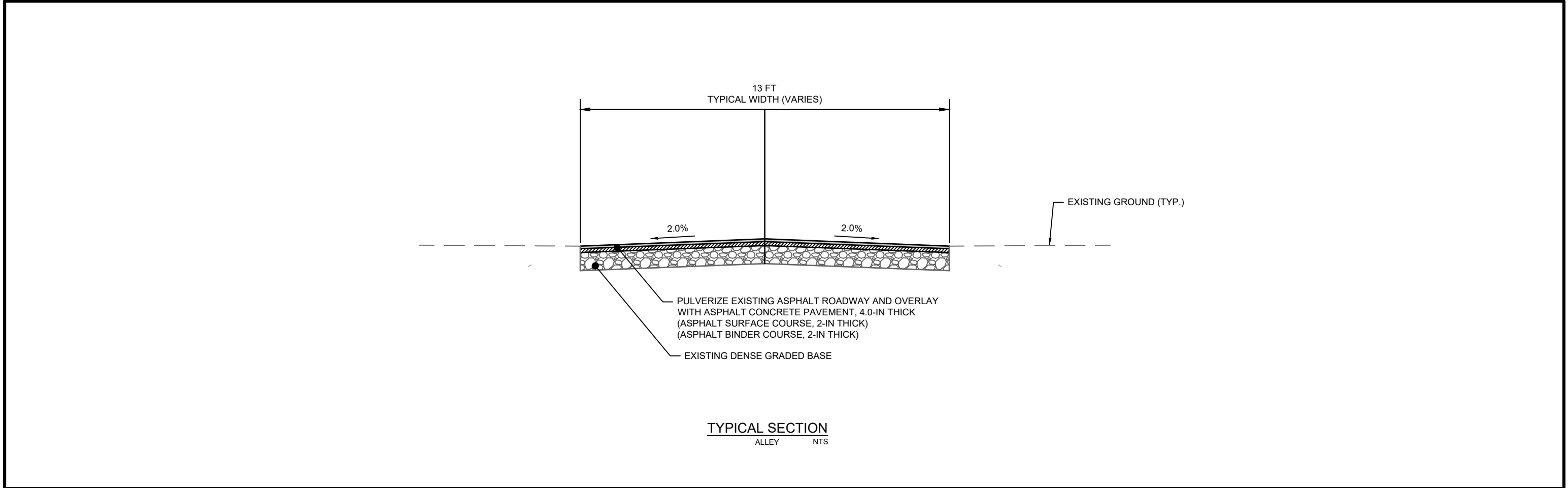


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TYPICAL SECTIONS

PROJECT NO:
19995004
SHEET
TYP2



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ	-	-		-

PLOT DATE: 2/23/2022 1:31 PM, G:\199\19995\19995004\CADD\Construction Documents\19995004 Typical Sections.dwg



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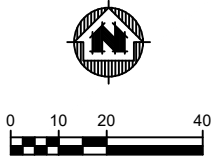
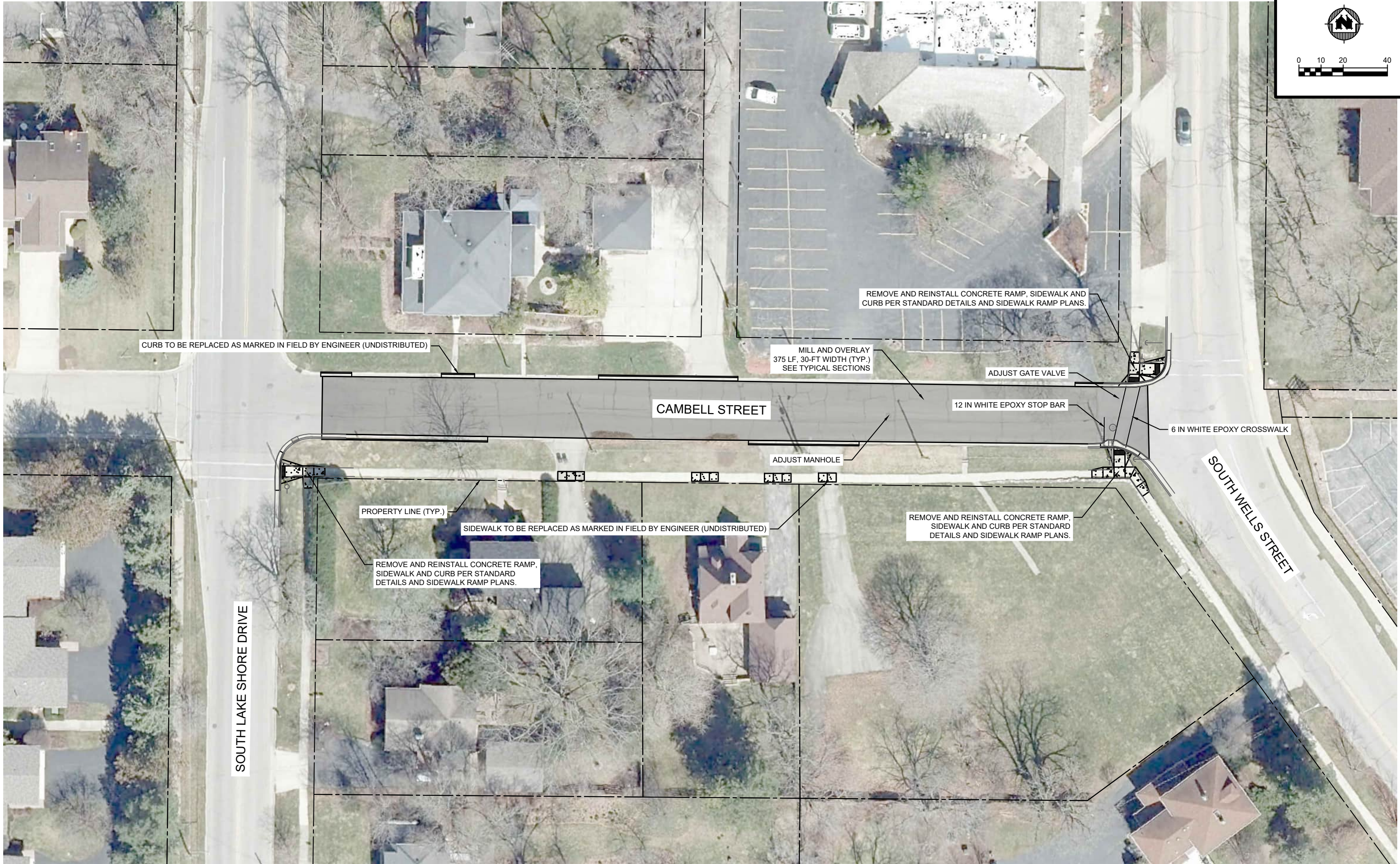
2022 STREET IMPROVEMENTS - PHASE 1
CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

TYPICAL SECTIONS

SHEET
TYP3

PROJECT NO.
19995004

SHEET
TYP3



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLAN SET	MJW
	JLJ				

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WALWORTH COUNTY, WISCONSIN

CONSTRUCTION PLAN - CAMBELL STREET

PROJECT NO:
19995004
SHEET
P1



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ				
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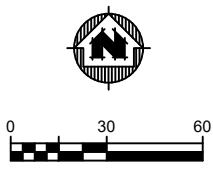
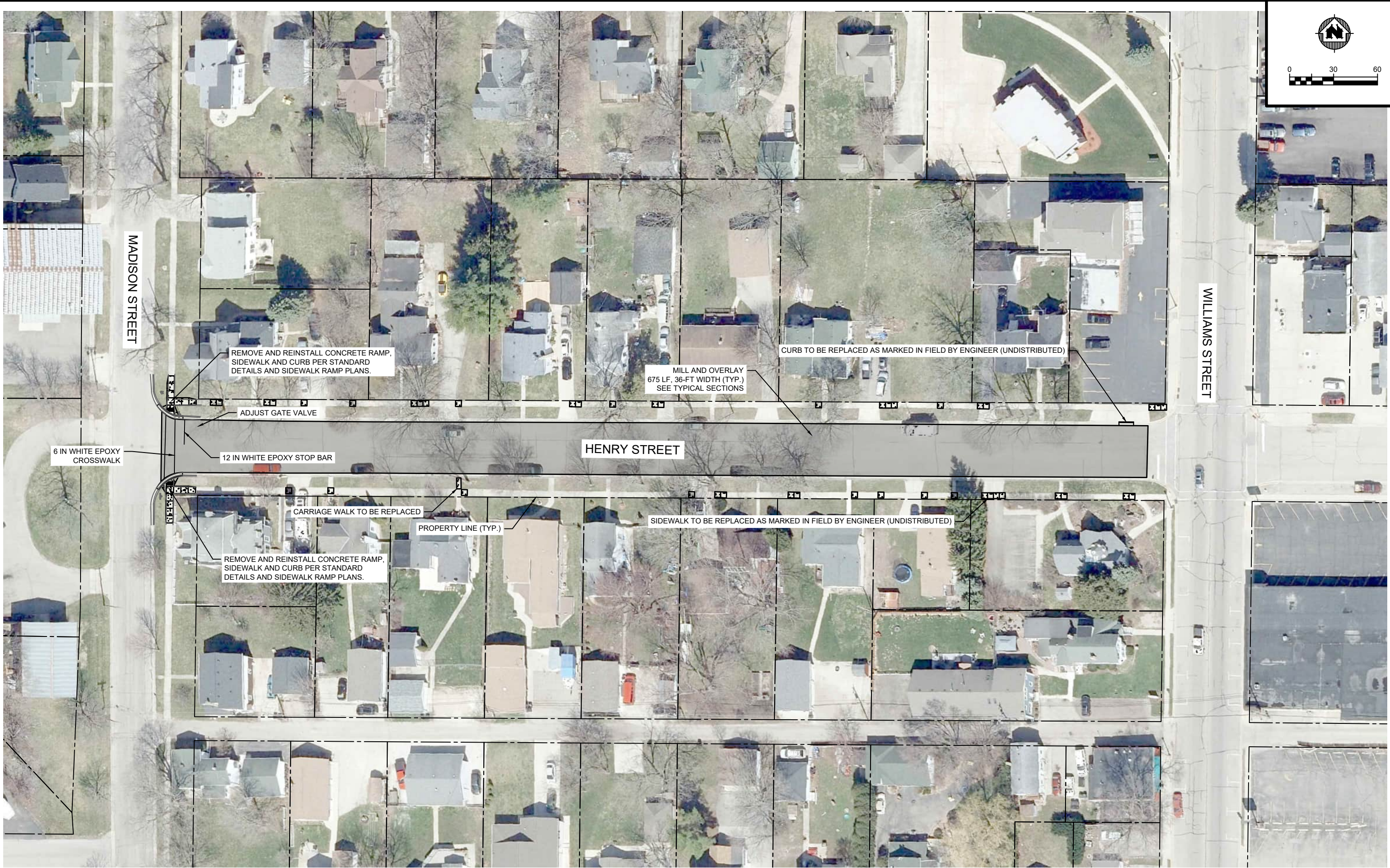


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CONSTRUCTION PLAN - SKY LANE DRIVE

PROJECT NO:
19995004
SHEET
P2



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLAN SET	MJW
	JLJ				
PLOT DATE: 2/23/2022 1:31 PM, G:\19\19995\19995004\CADD\Construction Documents\19995004 Plan Sheets.dwg					

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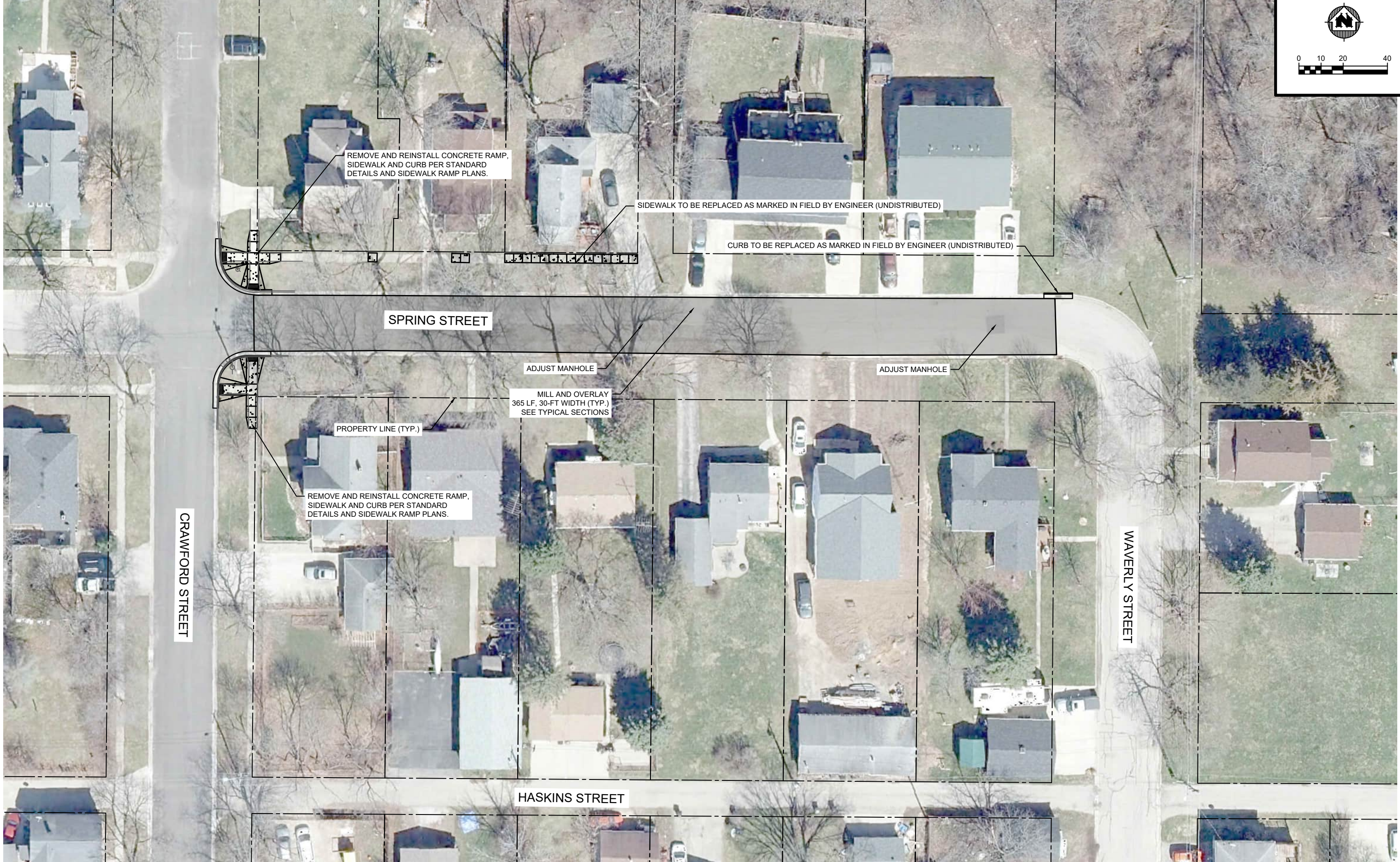


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CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

CONSTRUCTION PLAN - HENRY STREET

PROJECT NO:
19995004
SHEET
P3



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ				

PLOT DATE: 2/23/2022 1:31 PM, G:\19\19995\19995004\CADD\Construction Documents\19995004 Plan Sheets.dwg

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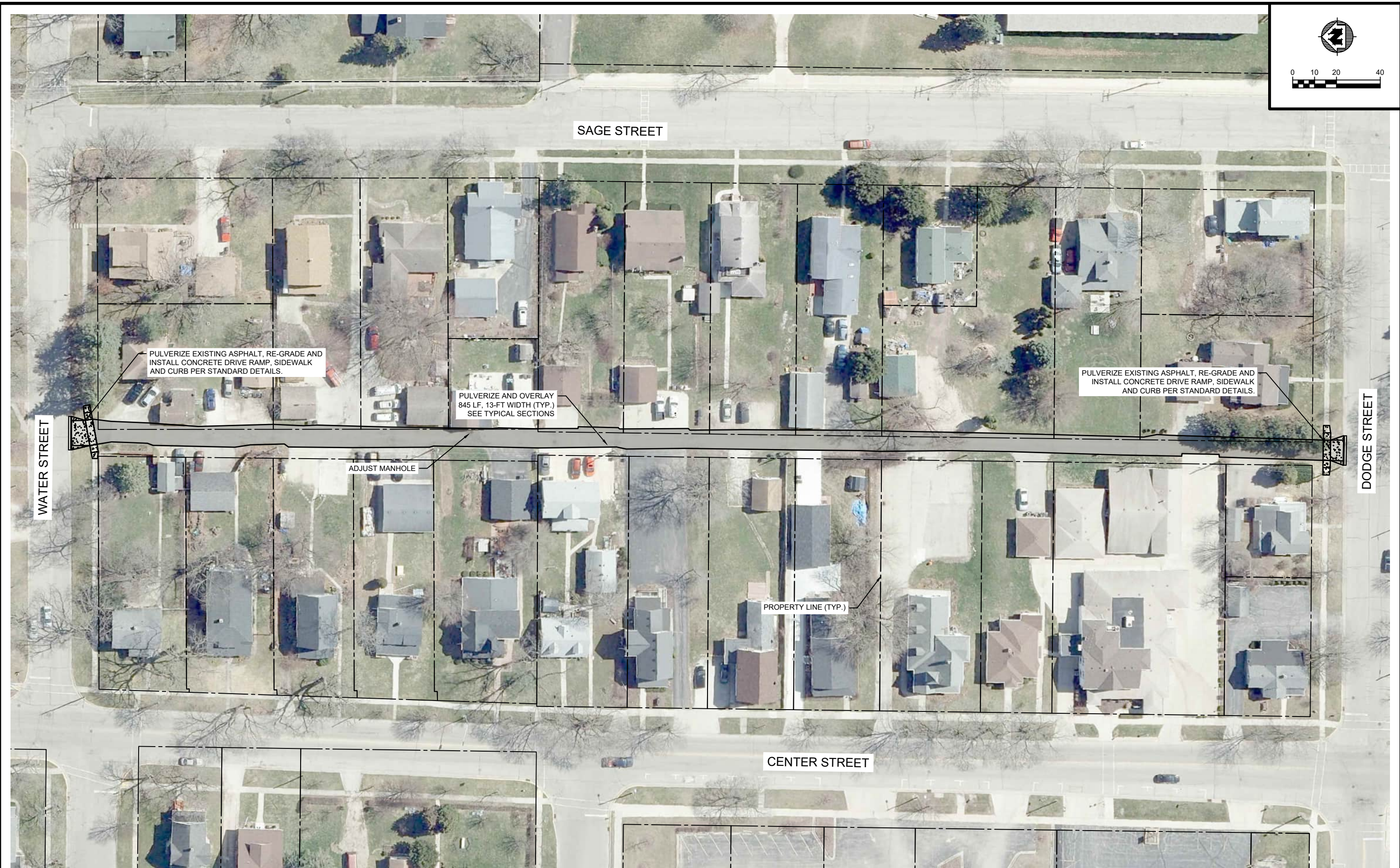


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CONSTRUCTION PLAN - SPRING STREET

PROJECT NO:
19995004
SHEET
P4



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ				

PLOT DATE: 2/23/2022 1:31 PM, G:\19\19995\19995004\CADD\Construction Documents\19995004 Plan Sheets.dwg

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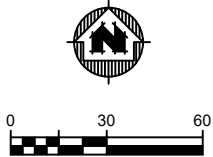


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CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

CONSTRUCTION PLAN - WATER ST & DODGE ST ALLEY

PROJECT NO:
19995004
SHEET
P5



WEST STREET

EAST STREET

REMOVE AND REINSTALL CONCRETE DRIVE RAMP, SIDEWALK AND CURB PER DETAILS.

REMOVE AND REINSTALL CONCRETE DRIVE RAMP, SIDEWALK AND CURB PER DETAILS.

PULVERIZE AND OVERLAY 387 LF, 13-FT WIDTH (TYP.) SEE TYPICAL SECTIONS

PROPERTY LINE (TYP.)

PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLAN SET	MJW
	JLJ				
PLOT DATE: 2/23/2022 1:31 PM, G:\19\19995\19995004\CADD\Construction Documents\19995004 Plan Sheets.dwg					

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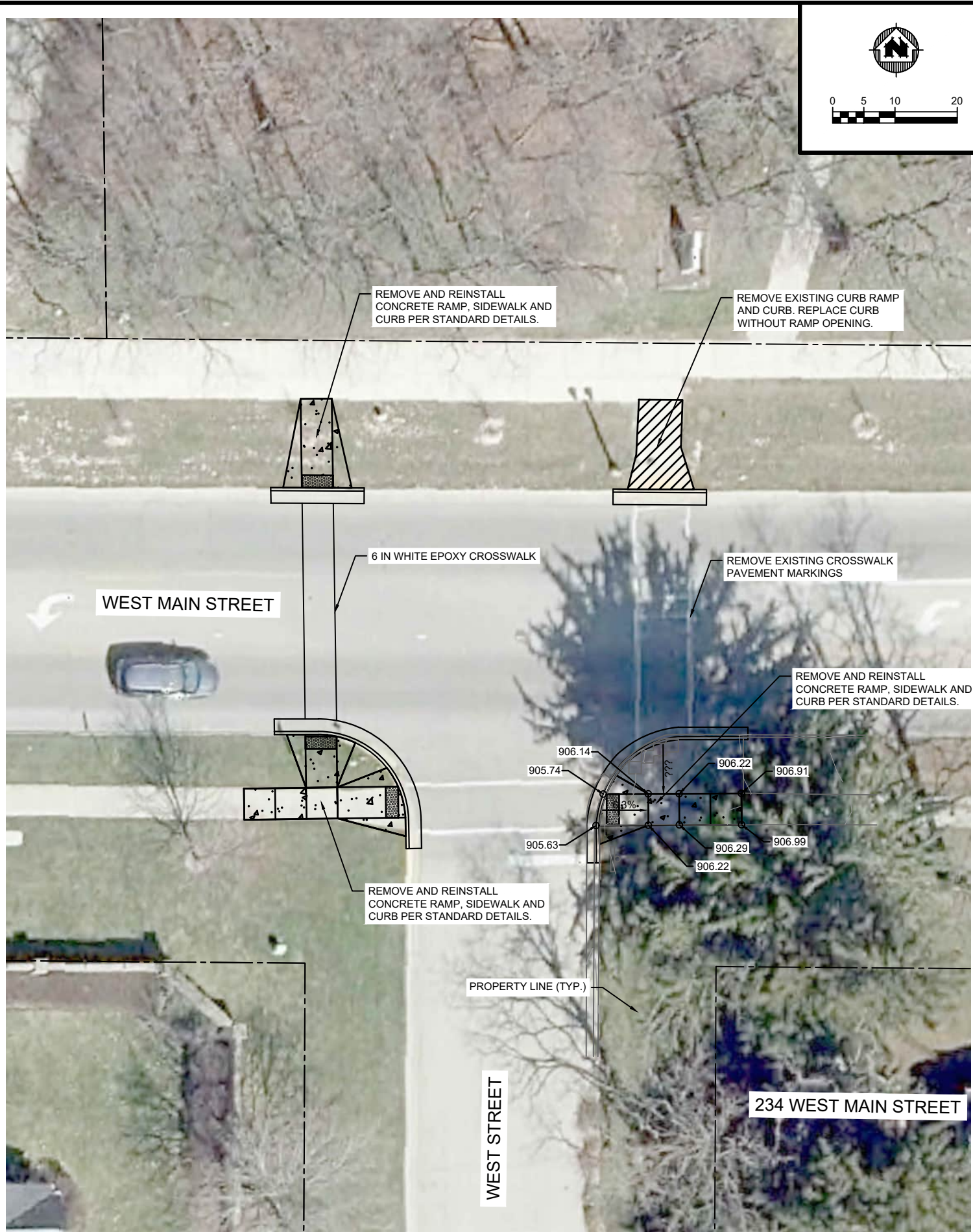
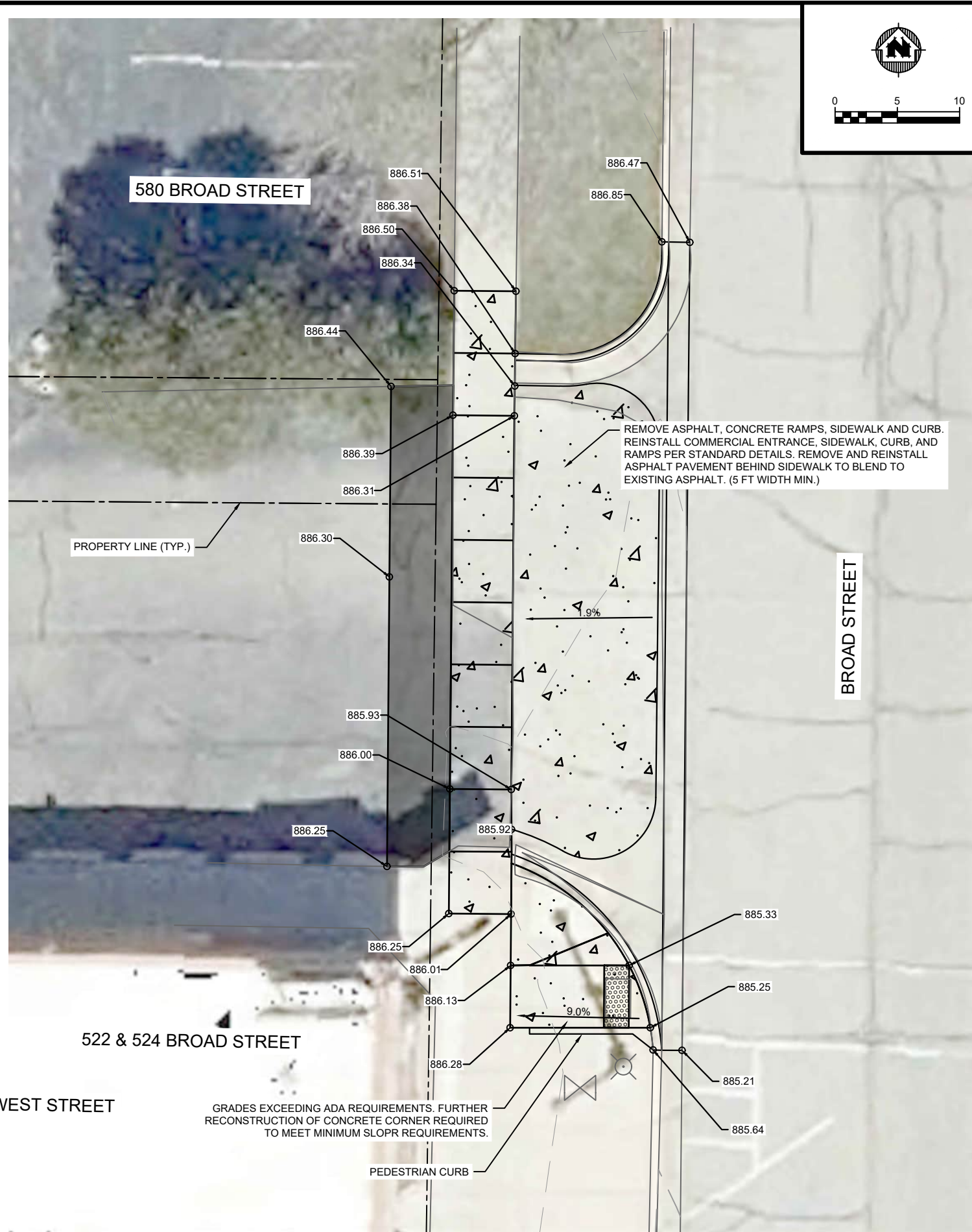


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CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

CONSTRUCTION PLAN - WEST ST & EAST ST ALLEY

PROJECT NO:
19995004
SHEET
P6



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ	-	-		

PLOT DATE: 2/23/2022 1:32 PM, G:\19\19995\19995004\CADD\Construction Documents\19995004 Plan Sheets.dwg

PRELIMINARY

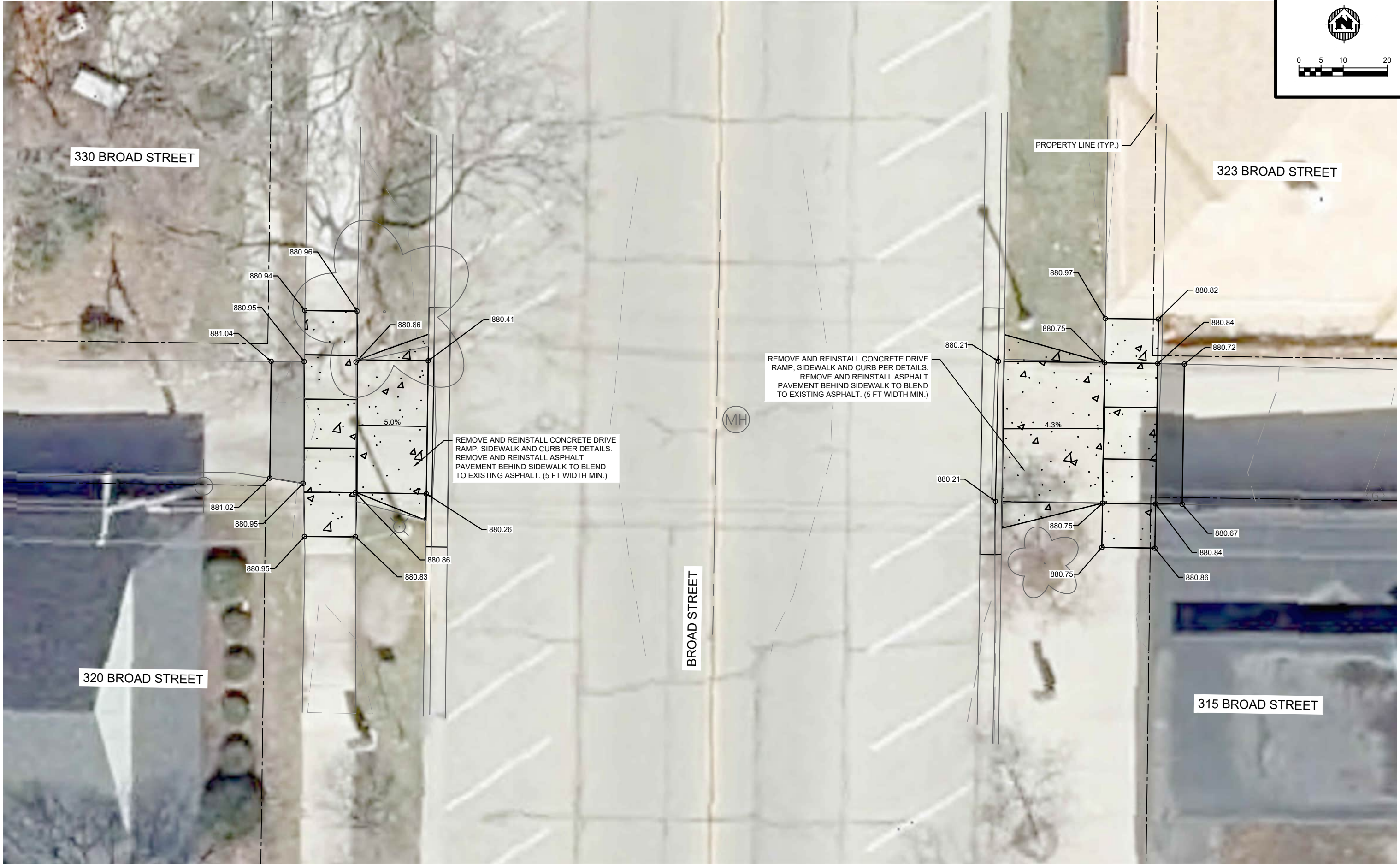


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2022 STREET IMPROVEMENTS - PHASE 1
CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

CONSTRUCTION PLAN - 522 BROAD STREET ENTRANCE

PROJECT NO:
19995004
SHEET
P7



		NO.		DATE		REVISION		BY	
PROJECT DATE: .		DRAWN BY: MJW		1		2/17/2022		MJW	
		DESIGNED BY: JLJ		2		2/23/2022		MJW	
		CHECKED BY: JLJ		-		-		-	
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PRELIMINARY

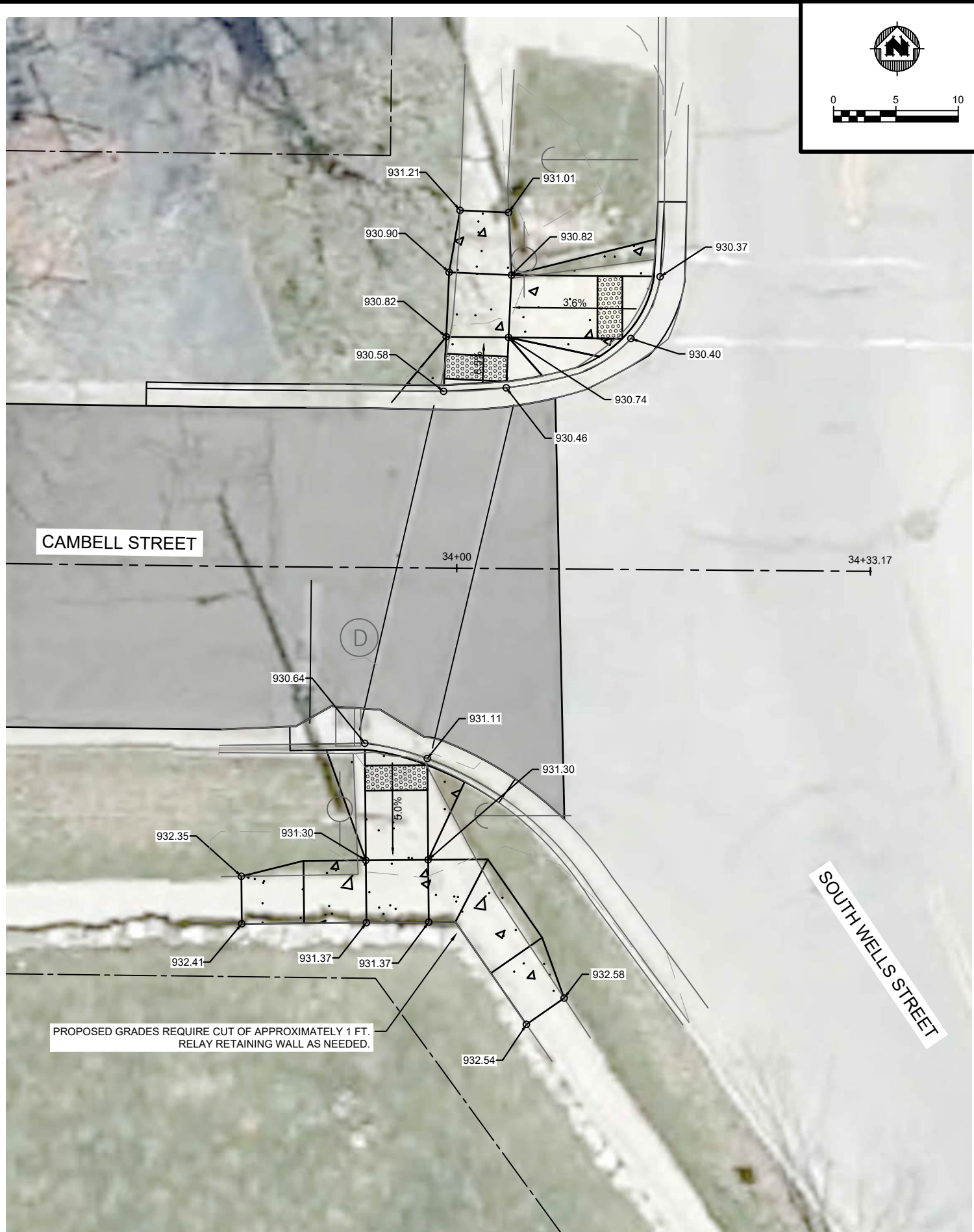


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2022 STREET IMPROVEMENTS - PHASE 1
CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

CONSTRUCTION PLAN - 315 & 320 BROAD STREET ALLEY
ENTRANCES

PROJECT NO:
19995004
SHEET
P8



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ	-	-		-

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PRELIMINARY

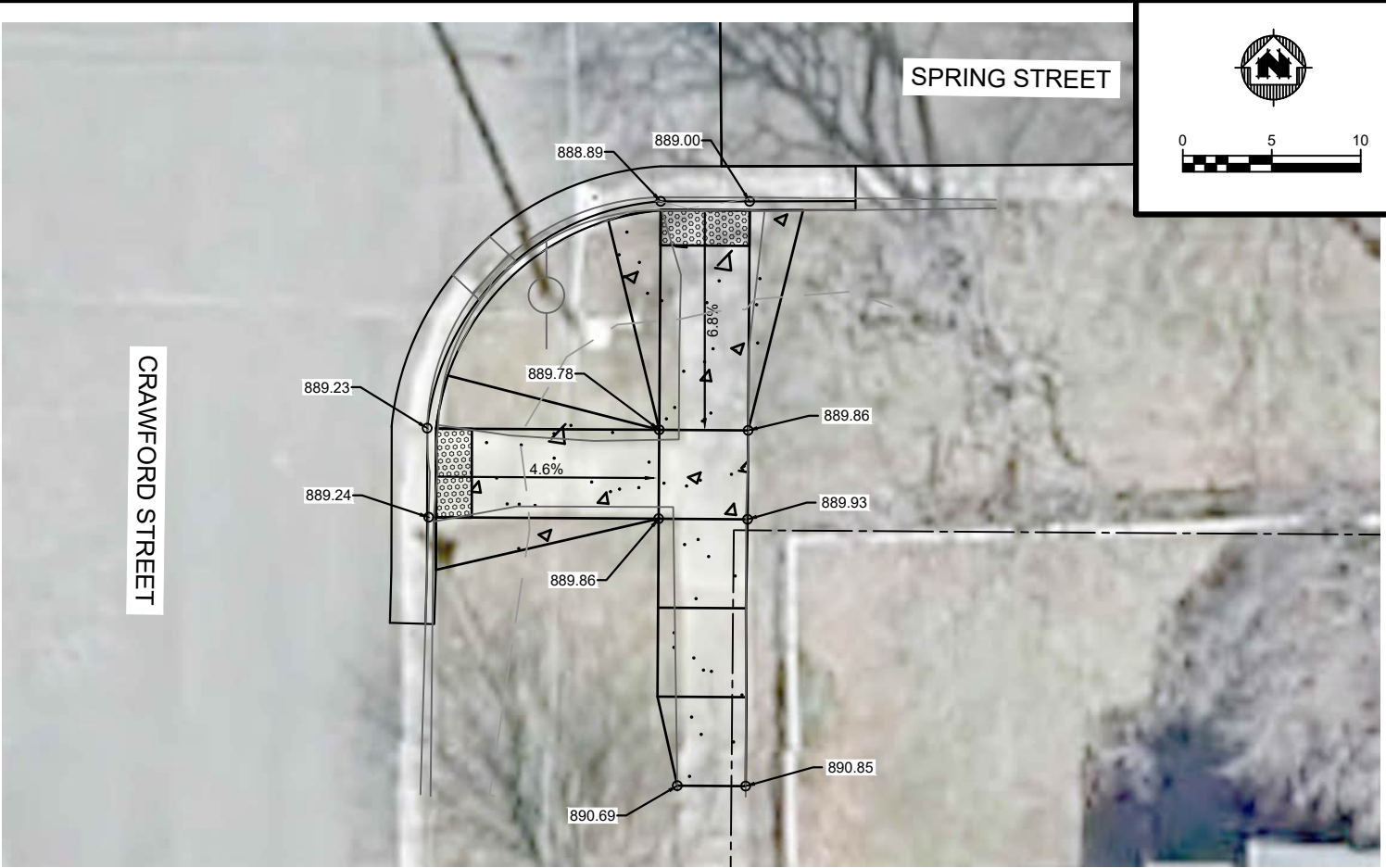
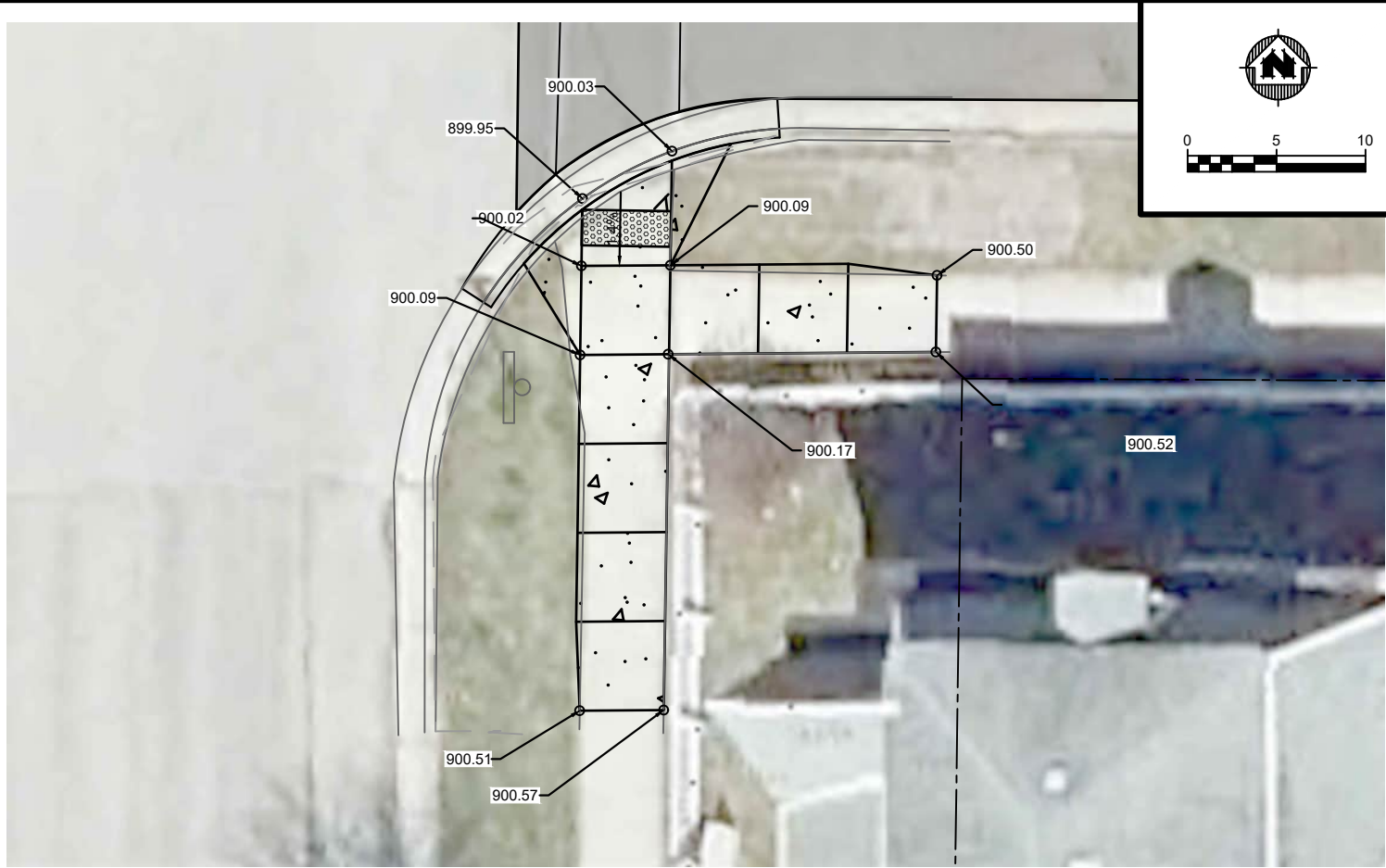
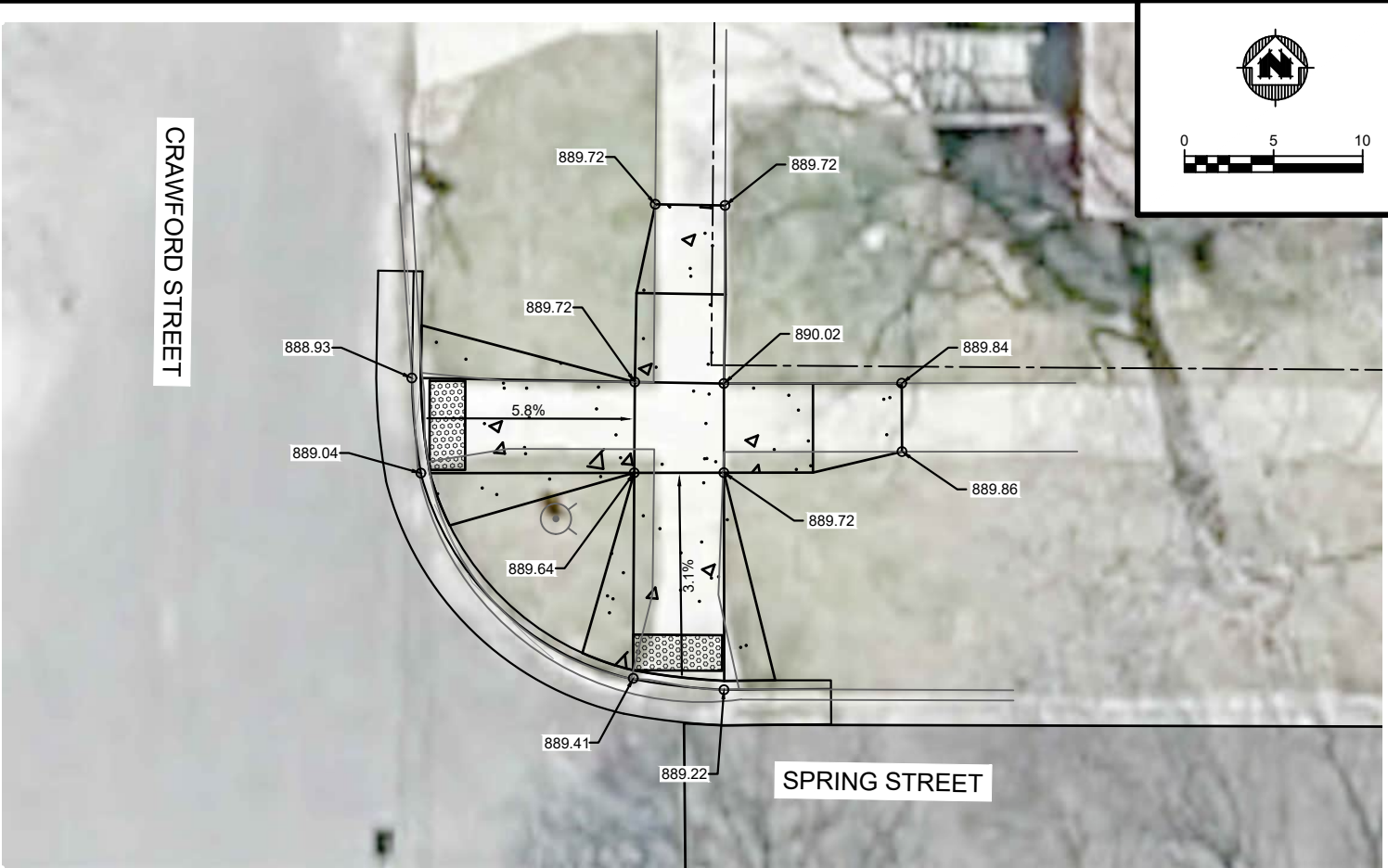
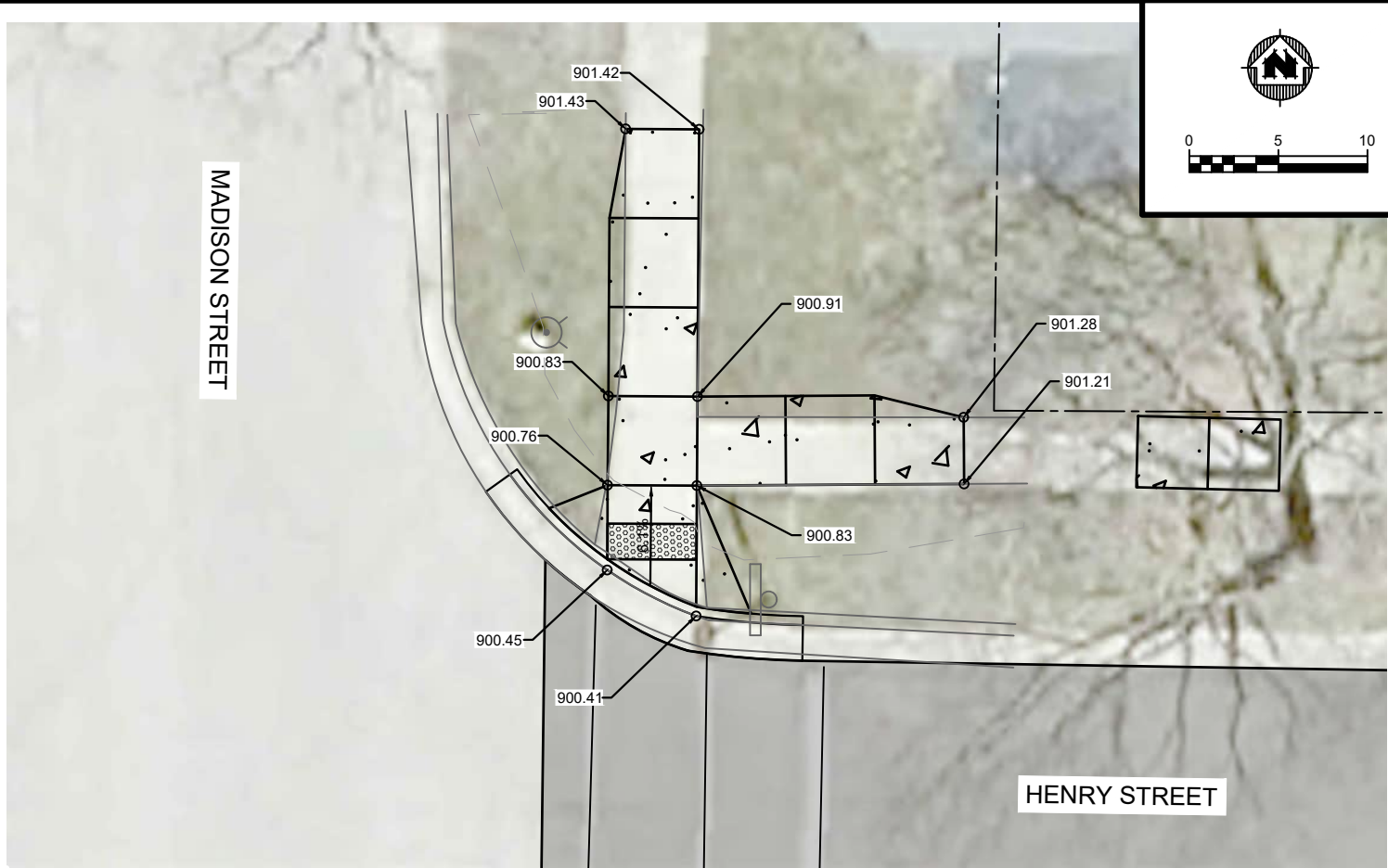


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2022 STREET IMPROVEMENTS - PHASE 1
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WALWORTH COUNTY, WISCONSIN

CONSTRUCTION PLANS - SIDEWALK RAMPS

PROJECT NO:
19995004
SHEET
P9



PROJECT DATE:	DRAWN BY:	NO.	DATE	REVISION	BY
	MJW	1	2/17/2022	PRELIMINARY PLANS	MJW
	JLJ	2	2/23/2022	BID PLANSET	MJW
	JLJ	-	-		-

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PRELIMINARY



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2022 STREET IMPROVEMENTS - PHASE 1
CITY OF LAKE GENEVA
WALWORTH COUNTY, WISCONSIN

CONSTRUCTION PLANS - SIDEWALK RAMPS

PROJECT NO:
19995004
SHEET
P10

Sec. 2-301. Composition.

- (a) Size. The Cemetery Board shall consist of five members who shall be appointed by the Mayor and confirmed by the Common Council. All members of the Cemetery Board shall be residents of the City of Lake Geneva. At least one member shall be a Common Council representative.
- (b) Term. The terms of all members of the Cemetery Board shall be for two years. For the term beginning on May 1, 2014, two citizen member's terms shall expire April 30, 2015, and two member's terms shall expire April 30, 2016. Any member of the Common Council appointed to the Cemetery Board shall be appointed for a one-year term and be appointed at the annual organizational meeting or at a reasonable time thereafter.
- (c) Eligibility. Any elector of the City, whether or not he/she holds a public office, shall be eligible to be appointed as a member of the Cemetery Board. No more than two members of the Common Council shall be members of the Cemetery Board at any one time.
- (d) Members of the Cemetery Board shall serve without compensation.

Sec. 2-302. Officers.

- (a) Officers of the Cemetery Board shall be elected annually in May.
- (b) Officers of the Cemetery Board shall be elected by the appointive members of the Cemetery Board. The Cemetery Board shall select a President, Vice President and Secretary.

Sec. 2-303. Authority and duties.

- (a) The Cemetery Board shall have the following authority and duties:
 - (1) Serve in an advisory capacity to the Common Council on all cemetery related issues.
 - (2) Cooperate with the Director of Public Works, subject to final authority by the Common Council, in allocating labor and machine work necessary to landscape and maintain the cemetery grounds in accordance with rules and regulations of the cemetery.
 - (3) Recommend, in cooperation with the Comptroller and Administrator, to the Common Council, from time to time, as to the investment and handling of cemetery accounts and funds.
 - (4) Communicate with the public, in cooperation with the Comptroller and Administrator, as to the funding needs of the cemetery, as those needs may change from time to time, for the purpose of promoting the proper designation of purpose for the funding, when members of the public are considering gifting or bequeathing monies to the cemetery.

- (b) All meetings shall be held at City Hall.

Sec. 2-304. Authority of Common Council.

- (a) Final authority. The Common Council shall have the final authority over all issues and decisions which will likely have a substantial effect upon the cemetery. The Common Council may not take action on such issues or decisions until after review and recommendation by the Cemetery Board. However, the Common Council may direct any other specific issue not enumerated herein, to the Cemetery Board for review, whereby the Cemetery Board shall have 60 days to complete a review and report a recommendation to the Comptroller. If the Cemetery Board fails to report on any issue within such sixty-day period, the Common Council may act without recommendation, unless more time is specifically granted to the Cemetery Board by resolution of the Common Council. This authority shall cover, but not be limited to, the following issues:
- (1) Accepting or conveying personal property with a fair market value of greater than \$1,000.
 - (2) Borrowing or lending funds.
 - (3) Cemetery employee labor relations and negotiations.
 - (4) Entering into any service or other contracts where the consideration for such contract has a fair market value of greater than \$1,000 in any one-year period.
- (b) Exclusive authority. The Common Council shall have exclusive authority, which means it has the sole authority to act with or without review and recommendation of the Cemetery Board, over the following issues:
- (1) Accepting or conveying any interest in real estate, other than for the sale of burial lots or individual grave site easements.
 - (2) Investment and control of all cemetery accounts and funds, including, but not limited to, the investment and control of all gifts, memorials or bequests from estates. The Administrator and/or the Comptroller may be directed by the Common Council to act as representative of the Common Council for the purpose of carrying out the Common Council's authority under this subsection.

Sec. 2-305. Authority of Comptroller.

- (a) The Comptroller shall be responsible for the administration of all cemetery accounts and funds and is subject to the direction and authority of the Common Council as provided in Section 2-304(b)(2). This responsibility includes, but is not limited to, bookkeeping, accounting, collection and disbursement of funds, and any other duties as specified elsewhere in this division or this Code, as such duties relate to the cemetery.
- (b) The Comptroller shall annually report to the Common Council as to the status of all cemetery accounts and funds. Annual reports shall include, but not be limited to,

the following:

- (1) An accounting of amounts deposited in, amounts withdrawn from, other income accruing to and the balance at the close of the reporting period of such accounts.
 - (2) An accounting of all gifts received, income from gifts deposited in accounts not accounted for under Subsection (b)(1) of this section, amounts expended from those accounts and the balance of those accounts at the end of the reporting period.
 - (3) The name of any financial institution or other location of funds at the close of the reporting period.
- (c) The Comptroller may, according the direction of the donor and the conditions of any trust, invest or otherwise dispose of the moneys or property received by him or her in trust for any of the purposes of this division and according to the terms of the trust. The Comptroller shall in all things faithfully discharge such trust according to law.

Sec. 2-306. Review and reporting.

The Cemetery Board, under its normal meeting procedures, shall review and prepare a recommendation for the Common Council on all cemetery-related issues, with the exception of those issues falling under the Common Council's exclusive authority as designated in Section 2-304(b). The Common Council may also direct the Cemetery Board to review and prepare a recommendation on any cemetery-related issue, as the Common Council deems appropriate. The Cemetery Board shall then report in writing to the City Clerk all such issues that have been acted upon by the Cemetery Board. The Clerk shall place all such reported issues on the consent agenda for action or approval at the Common Council's next regularly scheduled meeting. If necessary, the Administrator may petition for the scheduling of a special meeting for an issue which requires immediate action or approval. Any member of the Common Council may choose to take an issue off the consent agenda according to the Common Council's normal procedural requirements, as that member deems appropriate. The Cemetery Board, in so reporting such issues to the Clerk, shall provide a background summary of the issue and a specific recommendation to the Common Council as to action or approval.

Sec. 2-307. Sexton.

The Cemetery Board shall hire a Sexton, subject to the approval of a majority of the Common Council, whose salary shall be paid from funds as specified by the Common Council. The Sexton shall be responsible for the day-to-day operations of the cemetery, subject to the direction of the Director of Public Works and final authority of the Common Council. The Sexton may attend Cemetery Board and/or Common Council meetings, but is not required to and will not be paid for such attendance unless specifically directed to attend by affirmative vote of the Cemetery Board or the Common Council. The specific duties of the Sexton shall include:

- (1) Administration and enforcement of the rules and regulations of the cemetery as established in Section 2-308(b);
- (2) Serving as an advisor to and representative of the Cemetery Board as directed by the Cemetery Board.

Sec. 2-308. Cemetery rules, regulations and fee schedules.

- (a) Cemetery Board's procedural rules. The Cemetery Board shall adopt its own procedural rules for the operation of its meetings and for other purposes, as needed.
- (b) Establishment and review. The Cemetery Board shall establish and at least annually review rules and regulations for the cemetery, as well as a fee schedule for all cemetery-related fees, easement prices, and the like. A copy of such rules and regulations and fee schedule shall be kept and made available to the public at the Clerk's and the Comptroller's office. The Cemetery Board shall report in writing to the Clerk and Comptroller any proposed change, repeal or amendment to the rules and regulations and fee schedule as the Cemetery Board has deemed appropriate by affirmative vote. The Clerk shall then place such proposals on the consent agenda for action or approval at the Common Council's next regularly scheduled meeting. Any member of the Common Council may choose to take a proposal off the consent agenda according to the Common Council's normal procedural requirements, as that member deems appropriate.

Sec. 2-309. through Sec. 2-312. (Reserved)



3.4 SNOW & ICE CONTROL

1. Purpose
2. Ordinances
3. Responsibilities
4. Downtown snow removal
5. Storm classification
6. Priorities
7. Private streets
8. General
9. Property damage

Adopted by Common Council	01/??/1996
Amended by Common Council	??/??/2011
Amended by Common Council	x/x/2021

SECTION 1: INTRODUCTION, PURPOSE, AND GOAL

Introduction

Lake Geneva is a progressive and rapidly growing community of approximately 7900 people, located forty-five miles southwest of Milwaukee near the intersection of STH 120, STH 50 and US 12. The City is recognized as one of the premier vacation destinations in Wisconsin and the Midwest and attracts world-wide visitors. Many festivals can attract 10-50,000 visitors in any season. Area resorts capitalize on rolling acres of pristine landscape that meet the shores of Geneva Lake. Its proximity to Milwaukee, Madison, Chicago and Rockford also provide a very popular destination for one day visitors. It is essential that our community provides the best and most efficient snow and ice control possible. Although efforts have been made to be as specific as possible, *it should be noted that due to the unpredictable nature of snow and ice events in the State of Wisconsin, any plan needs to be flexible to accommodate a variety of circumstances. This document should be viewed as a general guide for snow and ice response with the understanding that responses differ with each event as each has unique characteristics.*

Background

Due to its geographic location, Lake Geneva is subject to freezing rain, ice, and snow anytime during the fall, winter, and spring months. Normally, winter storms can be expected during the months of November through April. The responsibility for keeping vehicular and pedestrian traffic moving safely on Lake Geneva's apx 45 miles of city streets following snow and ice storms lies with the Public Works Department.

Purpose

The purpose of a good snow and ice removal policy is to ensure the roadways are safe and passable* for the motoring public and for public service vehicles; however, there is general awareness that chlorides have a negative environmental impact on Geneva Lake as well as nearby soils, vegetation, waterways, infrastructure and vehicles. Chlorides also cause damage to the pavement. Every effort shall be made to minimize salt usage while still providing passable travel ways. The City does not maintain a 'bare/dry road' policy.

*According to Wisconsin Department of Transportation's Passable Roadways in a Winter Storm Event article, a passable roadway is defined as a roadway surface that is free from drifts, ridges and as much snow and ice as is practical and can be travelled at a reasonable speed. Reasonable speed is defined as a speed a vehicle can travel without losing traction. This means during and after a snow/ice storm, reasonable speed will be lower than the posted speed limit.

Goal

The City's overall goal is to plow all of its roadways curb to curb, from arterial and collector streets, to local residential streets and alleys of snow accumulation within twelve (12) hours after the snow has stopped. However storms with a long duration will take substantially longer to clear.

SECTION 2: CITY ORDINANCES FOR SNOW AND ICE CONTROL

Notice

An updated City snow and ice control policy may be available on the City website, DPW Offices and the City Clerk's Office around November 1st of each year.

Snow Emergency Declaration

PER MUNICIPAL CODE:

SECTION 74-10(a). DECLARATION. "The Emergency Manager or his/her designee, Mayor or in the Mayor's absence the President of the City Council shall have the authority to declare a snow emergency whenever conditions arise which in their judgment necessitate the same. The person declaring the snow emergency shall first consult with the DPW and Fire/EMS services if appropriate.

SECTION 74-10(b). AUTHORIZED ACTIONS. Upon the declaration of a snow emergency, the Police and Fire Chiefs are authorized to hire tow trucks, require snowplows to accompany emergency vehicles both inside and outside the corporate limits of the City, establish a public information telephone reception center, advise radio station WLKG of declaration of snow emergency, and take any other action necessary.

SECTION 74-10(c). PLOWING. The Street Department "shall first clear and keep clean all primary routes and entrances and exits to the emergency facilities, then all secondary routes shall be cleared and maintained." A map of streets designating facilities is in the office of the City Clerk, Fire Dept. and Police communications center.

SECTION 74-10(d). PARKING. "During a snow emergency, there shall be no parking on all primary and secondary routes. Any vehicles parked on such routes shall be towed away at the owner's expense as provided in Section 74-37."

SECTION 74-10(e). TERMINATION. "The snow emergency may be terminated by the

Emergency Manager, Mayor or City Council. The snow emergency shall be limited to the time during which such snow emergency conditions exist.”

SECTION 74-60(a). NO PARKING SIGNAGE FOR SNOW REMOVAL. “For the purpose of removing snow from the streets and surrounding areas, the Street Department may erect signs prohibiting parking in the particular area where snow is intended to be removed.”

SECTION 74-60(b). PENALTY FOR VIOLATION. “The Police Department may tow away all vehicles parked in violation pursuant to this subsection.”

SECTION XX-XXX. Snow removal around hydrants. It shall be the adjacent property owners responsibility to remove snow from around a fire hydrant placed in a Right-of-Way within 24hrs of the end of the storm per Ordinance # xxxxxxxxxxxx.

Sidewalks

Property owners are responsible for the sidewalks adjacent to their property on all sides. This includes ADA ramps up to the travelled portion of the roadway. If sidewalks are not cleared within 24 hours in areas outside the Central Business District, or within 12 hours in the Central Business District, the following procedure will be employed in accordance with Section 62-223:

- a. The City may schedule removal of snow any time after the 12 or 24 hour time period has lapsed. The downtown has heavy pedestrian usage; therefore the risk of public health, safety, and welfare is an overriding consideration.
- b. upon expiration of the time limit a forfeiture shall be levied in accordance with the City Code. Each 24 hour period shall cause a separate offense.
- c. the sidewalk shall be cleared by a City hired contractor at the direction of the Code Enforcer.

Contractor shall provide before and after photographs to the City for documentation purposes.

- d. deposit of snow in streets prohibited in accordance with Section 62-221, “No person shall cause to be deposited snow from his premises onto the sidewalk abutting thereon or onto any street...”

this includes pushing, placing or throwing snow across a street, ROW and/or alleyway. Snow shall stay on the side of the street/alley/right-of-way from where it originated.

Bike Paths

As certain bike paths are multi-use paths used as sidewalks, it is acknowledged that these areas need to be cleared of snow and ice. The City DPW will plow all bike paths in the parks and in and/or adjacent to the road right of way. Paths outside of these locations will not be cleared.

~~As certain bike paths are multi-use paths used as sidewalks, it is acknowledged that these areas need to be cleared of snow and ice. A map of these areas will be made available from time to time by the Common Council outlining which areas will be the responsibility of the adjacent property owners to maintain all year including snow/ice removal. The responsibilities will mirror that of the sidewalk snow maintenance ordinances. These areas shall be reviewed by the City from time to time and maps adjusted accordingly.~~

~~The City DPW will plow certain bike paths as time and resources allow. These areas include the paths in and around Vet's Park, sections of Edwards Blvd and Townline Rd. When frost is neither present in the soil nor deep enough to withstand plowing equipment, the DPW shall at its discretion allow snow to remain on the bike paths until such time as conditions will allow snow removal. As a general rule, the City does not chemically treat bike paths.~~

SECTION 3: RESPONSIBILITIES OF CITY PERSONNEL

Public Works Department

The task of keeping vehicular traffic moving on the City of Lake Geneva's 40 plus miles of streets during and following snow storms is the duty of the Public Works Department. The Department is responsible for the coordination and supervision of the entire snow and ice control operation. Tracking of storm warnings, making decisions as to type and timing of a snow and ice control operation, alerting personnel, tracking costs (Ice and Snow Control Report) and the continual observation of ice and snow operations are all part of the responsibilities. Although the Public Works Department directs snow plowing and ice control under the direction of the Director of Public Works, it depends heavily upon the continual support and cooperation of all other municipal departments within the City.

Lake Geneva Police Department

Two primary functions of the Police Department are assistance with deteriorating road conditions and the ticketing and towing of the vehicles in violation of Sections 74-10(d) and 74-60 of the Municipal Code of the City of Lake Geneva. The Police Department provides the first notice of hazardous conditions to Public Works particularly during the late evening and early morning hours. The Police Department also is responsible for communicating snow emergencies to the media.

City Code provides the Police Department may tow away all vehicles parked in violation of this subsection. During a snow emergency the vehicles in violation will be towed immediately or as soon as possible under existing conditions. In times of extreme emergency, the City may opt to tow all cars to a central location such as a public parking lot or the City Garage on Carey Street. (Illegally parked cars in violation SIGNIFICANTLY hinder safe plowing and removal operations)

Water, Wastewater & Cemetery Departments

Wastewater and Cemetery employees may be called upon during snow emergencies to supplement manpower shortages for reasons to include: illness of DPW personnel, inability to get to work, or extended storm conditions. Water Department employees shall ensure that substations, wells and towers are clear of snow and ice. In extreme circumstances, the City may call upon all employees with valid CDLs to plow during manpower shortages. It shall be the adjacent property owners responsibility to keep hydrants clear of snow and ice per Ordinance # XXXXXXXXXXXXX

Code Enforcement

DPW relies heavily on Code Enforcement to ensure that sidewalks and ADA ramps are properly cleared by property owners, and ensuring that private individuals contractors are not causing unsafe conditions by plowing or placing snow in roadways or other areas. Per Ordinance, if downtown walks/ramps are not cleared by property owners prior to crews clearing the area, there will be snow left behind in the parking stalls. If the property owners place snow in the parking lane after crews clear the area, it will be the property owner's responsibility to remove such snow. They may also be ticketed. City plows cannot clear stall areas when parked cars are present. CE ensures these rules are obeyed.

Repair Shop

The function of the Street Department Repair Shop in Lake Geneva's Snow and Ice Control Plan is to prepare all the equipment needed well in advance of the winter season. Included are repairs to any equipment that breaks down during any class storm either in the shop or in the field.

Preventative maintenance is also done on the trucks and equipment. Whenever possible, an additional employee is assigned to the mechanic shop to assist with two-man repairs. As the Department does not have a full time mechanic, repairs and maintenance are performed by staff as time allows during their normal duties and also private repair shops.

SECTION 4, DOWNTOWN SNOW REMOVAL

Downtown Snow Removal

Downtown snow removal is a difficult task. Crews cannot safely perform this function when traffic and/or pedestrians are present. Typically, except in extreme cases, this will be performed between midnight and 6am depending upon but not limited to the following: timing of a storm, duration, type, future forecast, amount of snow and the implementation of a snow emergency. DOT/FMCSA regulations also play a factor in the schedule. Priority shall be given to the 45 miles of City roadway being plowed and treated before stalls will be cleared.

There are no official rules that allow downtown properties to place their snow in the street. Historically the City has allowed this practice to alleviate the buildup of snow in the terrace section of the ROW downtown as a convenience to property owners even though it conflicts with City Ordinances. (the terrace section can be earth, lawn, pavement, brick, concrete, etc) Sidewalks must be cleared a minimum of 4' wide, if the property owners wish to clear a wider path, paths to the curb line or clear the terrace sections adjacent to their sidewalks they may do so but they must have this snow in the parking lanes before the crews clear the area or it will remain in the stalls at the responsibility of the property owner. (City and ADA rules mandate a 4' clear sidewalk only) If the snow event is significant or of a long duration, it is possible that crews will not windrow and pick up the downtown area for a few days. Staffing, machine availability and many other factors

come into play.

Crews clear all downtown City parking lots to allow late night guests, early morning workers and visitors an area to park while the removal is in progress. Parked cars can significantly hinder the snow removal process; every effort should be made by property owners along the snow removal route to make sure parked cars are not present along the snow removal route. If too many vehicles or pedestrians are near the snow removal route, crews will abandon the effort until the removal can be done safely.

Many factors contribute to the decision on whether to windrow the snow downtown, push it into piles, or simply plow it to the curb line. Amounts, temperature, type of snow, future forecasts, time of day, day of week, road conditions in other parts of the City, availability of staff, etc., all play a part. The decision on how to address this issue lies with the Street Superintendent as he/she is most cognoscente of the circumstances involved.

Property owners must accept realistic expectations of how and when snow removal can occur. Crews cannot remove snow in the parking lane when traffic and/or parked vehicles are present, therefore snow may remain in the gutter line and/or parking lane for a few days before it is removed. City crews make an effort not to pile snow over the curb onto the terrace where it would in fact be the property owners responsibility, (same as snow piled at the end of a driveway) this is why snow is left in the parking lane. Furthermore, if the snow is pushed onto the terrace, crews would not be able to collect it for future removal. Another misconception regarding windrows on the curb line or terrace is that it is against ADA rules. This is false; ADA ramps are at the intersections, not mid-block. If a property owner prefers a mid-block walkway, generally referred to as a carriage walk, it is at their discretion and responsibility to clear it.

As stated at the beginning of this section, there are many factors that contribute to any decision. Safety must be considered at all times.

SECTION 5: STORM CLASSIFICATIONS

Class “A” Storm (Less than 2 inches total accumulation)

This is a snow storm with an accumulation of less than 2 inches in depth and may include plowing and material application. Crews are dispatched to City buildings, walks, lots and all routes, addressing the arterial and collector streets, including hills, curves, controlled intersections on local roadways that serve the Police Station, Fire Stations, DPW and schools. However, during a freezing rain when extremely dangerous conditions exist, the entire City may be treated at the Superintendents discretion.

The Street Superintendent shall determine the need to call in employees if he/she feels the conditions require it. In the absence of the Street Superintendent, the Foreman or the Director of Public Works may call in staff. It then will be the Superintendent, Foreman or DPW’s decision whether to upgrade to a Class “B” storm or continue the Class “A”.

Class “B” Storm (2” To 8” Inches total accumulation)

This storm is a snowfall of two (2) inches to eight (8) inches in depth and may involve a full plowing and material application operation.

Under a Class “B” Storm, the DPW begins by dispatching plow trucks to each of the routes including all City buildings and lots servicing first any EMS/Fire and Police Dept. areas, parking lots, arterial and collector streets. During normal business hours downtown, the plows may have to place snow to the backs of parked cars. In this event, stalls shall be cleared as soon as safely possible depending on time of day and availability of staff. Every effort is made to keep open as many parking places as possible. Snow amounts, time of day and many other factors shall dictate if the snow will be piled in the parking lane or windrowed to the street center. Parking stalls cannot be cleared safely when traffic is present

A snow emergency will be declared during a Class “B” Storm if conditions continue to deteriorate and accumulations significantly increase. The Street Superintendent or his/her designee will stay in close contact with the Police Dept., who in turn will notify the Chief or his/her designee who acts as the City Emergency Manager and has the authority to call a Snow Emergency based on actual conditions. Generally accumulations of 3” or more, blowing and drifting, severe temperatures and future forecasts can all affect the decision. The Emergency Manager will also be in close contact with Fire and EMS services as to their need. The City

Emergency Manager or His/Her designee, the Mayor or in his/her absence the President of the Common Council shall have the authority to call or cancel a snow emergency.

All downtown lots shall be plowed and treated as soon as possible so as to be available for downtown traffic while the stalls are being plowed to the extent possible. This snow is moved into piles or pushed into windrows for removal later as the Superintendent directs per Sec 4.

Residential streets will be cleared after all Arterial and Collector roads are clear. As drivers clear their zones they may be instructed to pull off the residential streets from time to time to check the arterial and collector streets for buildup and then return to residential streets.

Drivers are instructed to plow and treat their arterial and collector streets first before entering residential areas. Drivers are to return to the arterial and collector streets from time to time to check if they are still clear. The Street Superintendent may assign a plow to keep certain streets clear if staff is available. This action would allow zone drivers to continue plowing on residential streets.

The Street Superintendent will be on patrol as time permits to watch for hazardous conditions. He/She will call drivers off of residential streets when he/she feels that the arterial and collector streets need immediate attention. He/She will remain in contact with the Police Department to relay messages to drivers of trouble spots. The Director of Public Works may also reclassify a storm as appropriate. He/She will remain aware of the forecasted weather and work with the Street Superintendent to call in employees as needed.

Employees from other Departments may also be called in as needed.

If in a Class "B" Storm the need arises, the Street Superintendent or Director of Public Works can authorize outside contractors to assist. All streets, parking lots, alleys, and municipal building sidewalks should be cleared in about 10-12 hours for a Class "B" Storm. In this case certain drivers may be kept back after normal hours to keep arterial and collector streets open and treated. As all storms are unique and many factors contribute to any decision, this will be evaluated on a per-storm basis.

Class "C" Storm (8" or more total accumulation)

This storm is extremely heavy snowfall, eight (8) inches or more in depth, occurring in a period of twenty-four hours or less. In this storm, life threatening situations can arise as emergency vehicles can become bogged down and stranded, therefore it is recommended that a Snow Emergency be called. When existing conditions and weather forecasts indicate a Class "C" Storm event is imminent, the Street Superintendent and Director of Public Works will maintain close communication with Police, EMS and Fire. The Street Superintendent or Director of Public Works may also arrange for outside contractors to assist City Employees. Primary and secondary route lanes along with PD, FD, EMS and DPW locations shall be the focus during these types of events with all other areas being done when time and resources permit.

SECTION 6: SNOW REMOVAL PRIORITIES

Appropriate Level of Service

Matching the level of service to roadway classification and vehicular volume will effectively provide a high quality winter travel-way for our citizens and visitors. The priorities are as follows:

- 1) Arterial roadways
- 2) Major and minor collectors
- 3) Local residential streets
- 4) Cul-de-sacs and dead end streets
- 5) Sidewalks in front of City property
- 6) Bike paths, certain areas.

The extreme cost and negative environmental impacts of a “bare pavement” policy at all times for each and every roadway is not feasible. If a citizen drives carefully for 1-2 blocks on their local street to a collector or major roadway with a higher level of service, then travel throughout Lake Geneva is easy and safe. Balancing level of service with resources is the more efficient use of Lake Geneva tax dollars and minimizes damage to our environment and vehicles. Local streets will not generally be treated during the plowing operation (except maybe certain intersections) but will be treated appropriately during freezing rain and where the forecast is for continued low temperatures. However, hills curves, and intersections will be treated in each of the Class A, B, or C Storm.

Cul-de-sacs and Dead Ends

Cul-de-sacs and dead ends require special equipment and are difficult to clear; therefore they are last on the street cleaning list. Drivers shall plow past cul-de-sacs and dead ends if they intersect with a through street. When a driver has completed all arterial, collector, and through residential streets, he then returns and plows cul-de-sacs and dead ends. Other drivers who have completed their zones will assist in any other zone with cul-de-sacs and dead ends.

Parking Lots and Alleys

Alleys and parking lots shall be plowed soon after the snow stops to allow residents, visitors, and employees to park their vehicles off-street.

Sidewalks

The Street Department is responsible for snow removal on sidewalks adjacent to City owned buildings and property. These will be addressed as soon after the City streets, parking lots and alleys are plowed as time allows.

Private sidewalk snow removal issues are those sidewalks adjacent to private property which, under City ordinance, are the responsibility of the abutting property owner for snow removal. City ordinance authorizes the City to initiate sidewalk snow removal for public safety and welfare if the snow and/or ice have remained on the surface for a period in excess of 24 hours after the termination of the storm. (except in the downtown area, see Ordinances) The procedure is set forth under the Public Notice section of the policy and is administered by Code Enforcement.

NOTE: In any storm event, Sidewalks that are the responsibility to be maintained by City crews will not be done until all streets are passable.

SECTION 7, PRIVATE STREETS

Private Streets

Snow removal from private streets shall not be provided except in an emergency situation ordered by Police, Fire or EMS.

SECTION 8, GENERAL

General.

Per USDOT/FMCSA Hours of Service regulations, no CDL driver shall work more than sixteen (16)

consecutive hours without ten (10) hours off duty. This includes non-driving hours. If needed, employees from other Departments may be called in to supplement Street Department employees. The DPW operates with enough staff for one shift only, many of the DPW's functions, including downtown snow removal, require the entire departments involvement. Crews will be scheduled accordingly.

Salt/brine may be applied to roadways before the snow falls and/or packs to enable easier snow/ice removal. At times the Superintendent at his/her discretion may dispatch several salt/brine trucks to specific areas prior to precipitation to help keep the impending snow from getting packed onto the roadway.

The City of Lake Geneva does not have a 'bare/dry road' policy.

DPW is also cognoscente of the tourist nature of the City and may at times increase levels of service in certain areas for anticipated traffic volumes during winter holidays and festivals.

The items below shall be applied using Best Management Practices from the Wisconsin Transportation Center, WisDOT, WisDNR and the Salt Smart Collaborative. All City of Lake Geneva DPW employees attend several seminars on an annual basis regarding salt/brine application. The Superintendent shall be in charge of ordering the proper use of all materials. Application patterns shall be generally applied towards the center line of a crowned roadway, or the uphill side of a slope. Intersections shall be broadly treated as to allow safe travel. As per the BMP's above, application rates will generally be kept to <500lbs per mile with traffic volume, weather and temperature being factors in increasing or decreasing rates at the discretion of the Superintendent.

Use of Abrasives

Abrasives do not prevent nor do they remove buildup of snow pack, to the contrary they can compound the problem by allowing the temporary melting and then rapid refreezing of the snow/ice. Abrasives can damage vehicles with a "sand blasting" effect as the sand is thrown up off the tires onto the body of the vehicle. Studies have shown they can also be very detrimental to the environment. They can be an advantage when temperatures are extremely low, however, they must be mixed with rock salt in an apx 5:1 ratio to prevent stockpile caking and freezing. This material also needs to be swept/cleaned from the roadways and catch basins and disposed of in a licensed landfill which can be very expensive. It shall be at the discretion of the Street Superintendent to properly order the use of abrasives.

Calcium Chloride

Studies have shown that straight salt or salt treated with calcium chloride is more economical to use and has better results than abrasives. It has been proven that one ton of salt can give the same results as three tons of sand. Even better results have been accomplished by pre-treating the salt with calcium chloride. This starts the salt working as soon as it hits the pavement. Because it is wet, calcium chloride is not thrown to the side of the road by the spreader or traffic. City trucks shall use 100% salt and brine unless directed otherwise by the Superintendent.

Salt Brine

Salt brine may be applied at the discretion of the Superintendent when situations warrant. Brine will be applied in accordance with industry standards generally between 25-60 gallons per mile. Primary routes, secondary routes and the downtown snow removal route shall be the primary focus of brine application along with certain hills, curves and intersections throughout the City.

Winter Street Sweeping

The street sweeper may be sent out whenever above freezing temperature opportunities allow the safe removal of accumulated sand and salt on bare pavement streets.

SECTION 9, Property Damage

Mailboxes

If contacted by a property owner about damage to mailboxes, the City will by policy pay the property owner a maximum of \$50.00 to replace damaged mailboxes if the actual plow struck the box or post. If the damage occurred because the box was not installed in accordance with Post Office Requirements (see Exhibit below) or because it was damaged by snow from a plow or in a current state of disrepair then repairs will be the responsibility of the property owner. It shall be at the discretion of the DPW Superintendent's investigation as to

when or if restitution is warranted. Property owners must contact DPW within 24 hours of damage in order to request an investigation. If replacement is found to be in order, DPW may place a temporary box until weather permits installation of permanent box.

Exhibit;

A Guide to USPS Mailbox Regulations;

The United States Postal Service (USPS) requires residential mailboxes to conform to a number of rules and regulations. The standardization of mailboxes helps to ensure the safety of mail carriers and the items they deliver. While some rules apply to all mailboxes in general, there are separate, specific regulations for locking, package or wall mount mailboxes.

General USPS Requirements for Curbside Residential Mailboxes

USPS Mailbox Regulations

USPS mailbox regulations for in ground and surface mount post installation.

All manufactured mailboxes must meet the internal and external dimension requirements of the USPS.

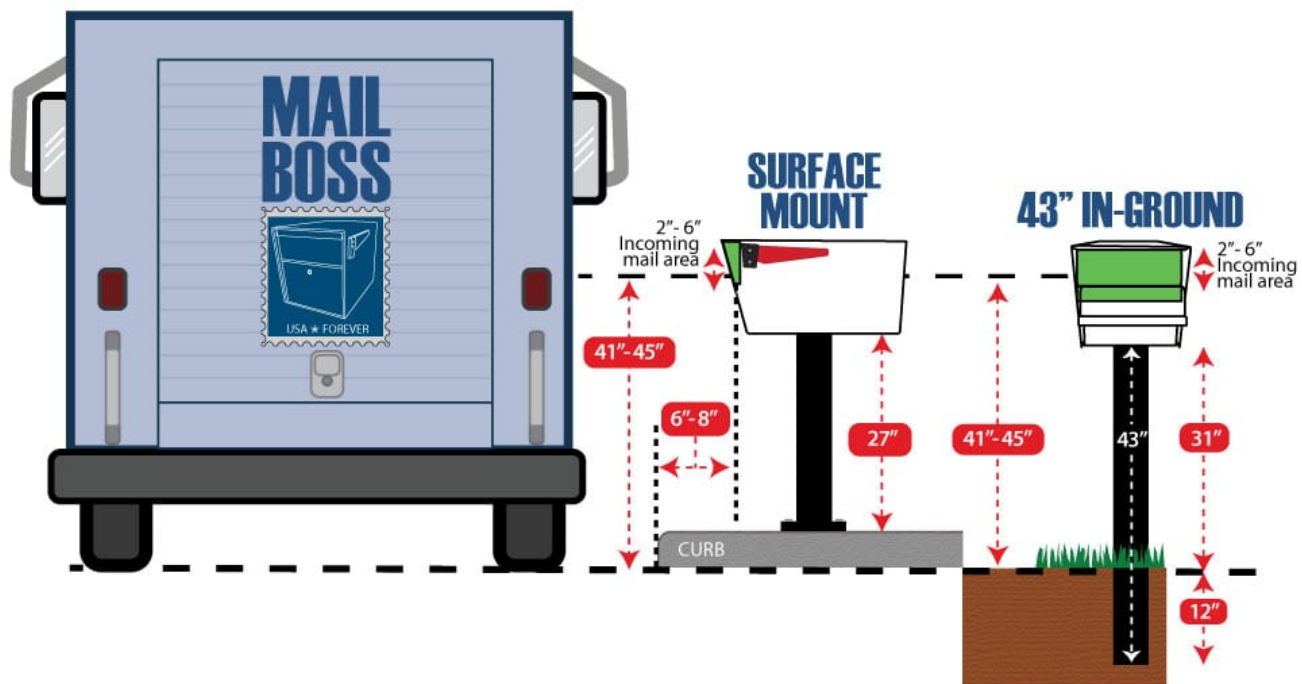
Curbside mailboxes must be placed on the right-hand side of the road and facing outward so that mail carriers can access it easily without leaving their vehicle.

The box or house number on a mailbox must be represented in numbers that are at least 1 inch tall. Numbers must be positioned visibly on the front or flag side of the box.

Mailboxes must be placed 6 to 8 inches away from the curb; the incoming mail slot or door must be 41 to 45 inches from the ground.

Curbside mailbox posts should be buried less than 24 inches deep and made from wood no larger than 4 inches high by 4 inches wide. Steel or aluminum pipes with a 2-inch diameter are also acceptable.

Newspaper receptacles may be mounted on the same post as the mailbox, but they must not contact it directly or be supported by it.



Rights-of-Way

It is understood that many property owners care for the ROW like private property. However, ROW's are designed among other things to provide storage for snow from the streets in the winter months. Many times during snow events crews must push snow in the ROW areas in order to open the roadways, especially in heavy amount events. This may cause damage to grass areas. The Superintendent will investigate these areas in the spring for repair. If it is found private companies or residents caused the damage it will be the property owners responsibility to repair. If it is found DPW is responsible, the areas will be repaired when weather and material availability allow in the spring in order of reporting. Mainly after 01 May of each year. At no time will private landscaped areas placed in the ROW be repaired by the City, this includes trees, flowers, bushes, artwork, etc. It is against City ordinances to place anything in the ROW without a permit except a USPS approved mailbox and post.

SECTION 10, RULES

If they can do so safely, City crews are instructed to plow around any stranded or disabled vehicle and inform the Police Dept Communications Center of the location of the stranded vehicle. Any driver finding a vehicle completely blocking a street will radio the Police Communications Center and Street Superintendent or Foreman for immediate removal. Crews are instructed to continue plowing their routes or zone until they are sure that all roads are passable*. Crews shall not stop to assist any motorist or pedestrian unless an emergency exists which threatens public safety. Crews shall not plow or treat any private property unless directed by the Superintendent, Director, Police or Fire Dept. while assisting police, ambulance or fire department emergency response personnel. Crews are instructed to continue to plow past any driveway even if the accumulated snow from their plow blocks the end of the driveway. It is the responsibility of the private property owner to clear any snow from their driveway. This includes sidewalks and ADA ramps that enter or connect to the travelled portion of the roadway. Crews shall not stop to clear any private drive or sidewalk connecting to the roadway unless they meet the emergency criteria above.

*See section 1.

MEMORANDUM TO THE CITY OF LAKE GENEVA

To: Tom Earle, Director of Public Works
From: Naomi Rauch
CC: Lana Kropf, Greg Governatori, Mike Timmers
Date: January 27, 2022
Re: Bid Approval and Recommendation for Bloomfield at STH 120 Traffic Signal

A total of three bids were received on Thursday, January 27, 2022 for the **Bloomfield at STH 120 Traffic Signal**. The bids were reviewed, and the final bid tab results are as follows:

Item	<u>Bidder No. 1</u>	<u>Bidder No. 2</u>	<u>Bidder No. 3</u>
	LaLonde Contractors, Inc. (Waukesha, WI)	Asphalt Contractors, Inc. (Union Grove, WI)	Zignego Company (Waukesha, WI)
TOTAL BID	\$527,728.72	\$708,286.81	\$717,123.96

Per the Contract, the award of the **Bloomfield at STH 120 Traffic Signal** shall go to the lowest responsible bidder based on the lowest bid of the work that the City chooses to complete. Based on the review of the bids, the review of the bidder's qualification statement, previous experience and discussion with the City Staff, it is my recommendation to award the **Bloomfield at STH 120 Traffic Signal** contract to **LaLonde Contractors** for the total cost of \$527,728.72. A bid bond of 5% of the contract price, and qualification statement were submitted and complete with each bid. The project General Bid Tab is attached for your review.



Bloomfield at STH 120 Traffic Signal - General Bid Tab

City of Lake Geneva, Walworth County, Wisconsin - Bid Opening 1/27/2022, 10am

Bloomfield at STH 120 Traffic Signal - Base Bid				LaLonde Contractors, Inc.		Asphalt Contractors, Inc.		Zignego Company	
Item No.	Item Description	Unit	Estimated Qty.	Bid Unit Price	Price	Bid Unit Price	Price	Bid Unit Price	Price
203.01	Removing Small Pipe Culverts	EACH	1	\$275.00	\$275.00	\$275.00	\$275.00	\$1,220.00	\$1,220.00
204.01	Removing Concrete Pavement	SY	332	\$10.63	\$3,529.16	\$16.00	\$5,312.00	\$9.95	\$3,303.40
204.011	Removing Asphaltic Surface	SY	175	\$10.61	\$1,856.75	\$19.00	\$3,325.00	\$4.80	\$840.00
204.015	Removing Curb & Gutter	LF	182	\$8.25	\$1,501.50	\$14.00	\$2,548.00	\$7.50	\$1,365.00
204.018	Removing Delineators and Markers	EACH	1	\$10.00	\$10.00	\$36.00	\$36.00	\$10.00	\$10.00
204.0195	Removing Concrete Bases	EACH	7	\$425.00	\$2,975.00	\$425.00	\$2,975.00	\$295.00	\$2,065.00
204.022	Removing Inlets	EACH	1	\$275.00	\$275.00	\$275.00	\$275.00	\$650.00	\$650.00
204.0245.01	Removing Storm Sewer (size) (01. 24-INCH)	LF	31	\$16.00	\$496.00	\$16.00	\$496.00	\$18.00	\$558.00
204.9002.S	Removing Advance Flasher Assemblies Type 2	EACH	2	\$263.50	\$527.00	\$263.50	\$527.00	\$315.39	\$630.78
204.9060.S.01	Removing (item description) (Removing Lighting Units)	EACH	4	\$440.20	\$1,760.80	\$440.20	\$1,760.80	\$712.67	\$2,850.68
204.9060.S.02	Removing (item description) (Removing Apron Endwalls)	EACH	1	\$200.00	\$200.00	\$200.00	\$200.00	\$265.00	\$265.00
204.9060.S.22	Removing (item description) (Removing Luminaires)	EACH	4	\$46.50	\$186.00	\$46.50	\$186.00	\$163.76	\$655.04
205.01	Excavation Common	CY	770	\$31.49	\$24,247.30	\$36.00	\$27,720.00	\$36.50	\$28,105.00
208.01	Borrow	CY	10	\$36.65	\$366.50	\$68.00	\$680.00	\$38.90	\$389.00
213.0100.01	Finishing Roadway (project) (STH 120 & BLOOMFIELD)	EACH	1	\$2,654.00	\$2,654.00	\$15,000.00	\$15,000.00	\$1,000.00	\$1,000.00
305.011	Base Aggregate Dense 3/4-Inch	TON	541	\$25.90	\$14,011.90	\$32.00	\$17,312.00	\$33.00	\$17,853.00
305.012	Base Aggregate Dense 1 1/4-Inch	TON	1184	\$21.67	\$25,657.28	\$32.00	\$37,888.00	\$24.50	\$29,008.00
312.011	Select Crushed Material	TON	147	\$35.85	\$5,269.95	\$55.00	\$8,085.00	\$32.15	\$4,726.05
415.009	Concrete Pavement 9-Inch	SY	243	\$83.91	\$20,390.13	\$108.00	\$26,244.00	\$100.00	\$24,300.00
416.061	Drilled Tie Bars	EACH	248	\$11.57	\$2,869.36	\$5.00	\$1,240.00	\$30.00	\$7,440.00
416.062	Drilled Dowel Bars	EACH	192	\$17.91	\$3,438.72	\$5.00	\$960.00	\$30.00	\$5,760.00
416.171	Concrete Pavement Repair	SY	145	\$123.45	\$17,900.25	\$120.00	\$17,400.00	\$120.00	\$17,400.00
416.172	Concrete Pavement Replacement	SY	145	\$141.35	\$20,495.75	\$120.00	\$17,400.00	\$120.00	\$17,400.00
455.0605	Tack Coat	GAL	87	\$8.00	\$696.00	\$8.00	\$696.00	\$8.00	\$696.00
460.5223	HMA Pavement 3 LT 58-28 S	TON	160	\$153.00	\$24,480.00	\$160.00	\$25,600.00	\$153.00	\$24,480.00
460.5224	HMA Pavement 4 LT 58-28 S	TON	123	\$123.00	\$15,129.00	\$160.00	\$19,680.00	\$123.00	\$15,129.00
465.0105	Asphaltic Surface	TON	30	\$138.00	\$4,140.00	\$170.00	\$5,100.00	\$138.00	\$4,140.00
465.011	Asphaltic Surface Patching	TON	0	\$200.00	\$0.00	\$0.00	\$0.00	\$325.00	\$0.00
520.8	Concrete Collars for Pipe	EACH	2	\$425.00	\$850.00	\$425.00	\$850.00	\$1,556.00	\$3,112.00
522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	1	\$1,100.00	\$1,100.00	\$1,100.00	\$1,100.00	\$689.00	\$689.00
522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	2	\$1,300.00	\$2,600.00	\$1,300.00	\$2,600.00	\$722.00	\$1,444.00
601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	166	\$38.72	\$6,427.52	\$40.00	\$6,640.00	\$70.00	\$11,620.00
601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	261	\$41.17	\$10,745.37	\$40.00	\$10,440.00	\$70.00	\$18,270.00
602.041	Concrete Sidewalk 5-Inch	SF	401	\$9.88	\$3,961.88	\$20.00	\$8,020.00	\$50.00	\$20,050.00
602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	49	\$38.33	\$1,878.17	\$80.00	\$3,920.00	\$200.00	\$9,800.00
608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	36	\$94.00	\$3,384.00	\$94.00	\$3,384.00	\$46.00	\$1,656.00
608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	71	\$98.00	\$6,958.00	\$98.00	\$6,958.00	\$60.00	\$4,260.00
608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	21	\$160.00	\$3,360.00	\$160.00	\$3,360.00	\$128.00	\$2,688.00
611.053	Manhole Covers Type J	EACH	1	\$825.00	\$825.00	\$825.00	\$825.00	\$1,137.00	\$1,137.00
611.0606	Inlet Covers Type B	EACH	1	\$975.00	\$975.00	\$975.00	\$975.00	\$1,352.00	\$1,352.00

611.0642	Inlet Covers Type MS	EACH	1	\$975.00	\$975.00	\$975.00	\$975.00	\$857.00	\$857.00
611.2005	Manholes 5-FT Diameter	EACH	1	\$2,600.00	\$2,600.00	\$2,600.00	\$2,600.00	\$4,469.00	\$4,469.00
611.322	Inlets 2x2-FT	EACH	1	\$1,850.00	\$1,850.00	\$1,850.00	\$1,850.00	\$1,509.00	\$1,509.00
611.3901	Inlets Median 1 Grate	EACH	1	\$2,025.00	\$2,025.00	\$2,025.00	\$2,025.00	\$1,771.00	\$1,771.00
616.0700.S	Fence Safety	LF	750	\$2.53	\$1,897.50	\$3.90	\$2,925.00	\$2.53	\$1,897.50
619.1	Mobilization	EACH	1	\$20,647.96	\$20,647.96	\$110,000.00	\$110,000.00	\$136,100.00	\$136,100.00
623.02	Dust Control Surface Treatment	SY	2339	\$0.01	\$23.39	\$2.00	\$4,678.00	\$0.01	\$23.39
624.01	Water	MGAL	4	\$52.80	\$211.20	\$100.00	\$400.00	\$70.00	\$280.00
628.1504	Silt Fence	LF	2113	\$1.89	\$3,993.57	\$2.00	\$4,226.00	\$1.89	\$3,993.57
628.152	Silt Fence Maintenance	LF	2113	\$0.10	\$211.30	\$0.01	\$21.13	\$0.10	\$211.30
628.702	Inlet Protection Type D	EACH	19	\$110.00	\$2,090.00	\$135.00	\$2,565.00	\$110.00	\$2,090.00
628.7504	Temporary Ditch Checks	LF	30	\$8.00	\$240.00	\$9.00	\$270.00	\$8.00	\$240.00
628.7555	Culvert Pipe Checks	EACH	4	\$30.00	\$120.00	\$40.00	\$160.00	\$30.00	\$120.00
633.52	Markers Culvert End	EACH	3	\$60.00	\$180.00	\$75.00	\$225.00	\$60.00	\$180.00
634.0816	Posts Tubular Steel 2x2-Inch X 16-FT	EACH	10	\$115.00	\$1,150.00	\$295.00	\$2,950.00	\$115.00	\$1,150.00
637.221	Signs Type II Reflective H	SF	128	\$18.80	\$2,406.40	\$32.40	\$4,147.20	\$18.80	\$2,406.40
637.2215	Signs Type II Reflective H Folding	SF	45	\$22.00	\$990.00	\$36.40	\$1,638.00	\$22.00	\$990.00
637.223	Signs Type II Reflective F	SF	54	\$21.00	\$1,134.00	\$34.60	\$1,868.40	\$21.00	\$1,134.00
638.2102	Moving Signs Type II	EACH	3	\$90.00	\$270.00	\$100.00	\$300.00	\$90.00	\$270.00
638.2602	Removing Signs Type II	EACH	18	\$10.00	\$180.00	\$19.80	\$356.40	\$10.00	\$180.00
638.3	Removing Small Sign Supports	EACH	12	\$10.00	\$120.00	\$19.80	\$237.60	\$10.00	\$120.00
638.4	Moving Small Sign Supports	EACH	1	\$10.00	\$10.00	\$100.00	\$100.00	\$10.00	\$10.00
643.03	Traffic Control Drums	DAY	5887	\$0.20	\$1,177.40	\$0.60	\$3,532.20	\$0.20	\$1,177.40
643.042	Traffic Control Barricades Type III	DAY	2578	\$0.15	\$386.70	\$1.15	\$2,964.70	\$0.15	\$386.70
643.0715	Traffic Control Warning Lights Type C	DAY	1477	\$0.35	\$516.95	\$0.35	\$516.95	\$0.35	\$516.95
643.08	Traffic Control Arrow Boards	DAY	124	\$5.00	\$620.00	\$40.00	\$4,960.00	\$5.00	\$620.00
643.09	Traffic Control Signs	DAY	2883	\$0.50	\$1,441.50	\$0.70	\$2,018.10	\$0.50	\$1,441.50
643.092	Traffic Control Covering Signs Type II	EACH	5	\$75.00	\$375.00	\$75.00	\$375.00	\$75.00	\$375.00
643.105	Traffic Control Signs PCMS	DAY	171	\$25.00	\$4,275.00	\$40.00	\$6,840.00	\$25.00	\$4,275.00
644.142	Temporary Pedestrian Surface Plywood	SF	1521	\$4.53	\$6,890.13	\$4.70	\$7,148.70	\$0.01	\$15.21
644.181	Temporary Pedestrian Barricade	LF	361	\$5.00	\$1,805.00	\$15.00	\$5,415.00	\$5.00	\$1,805.00
645.022	Geogrid Type SR	SY	70	\$5.45	\$381.50	\$8.50	\$595.00	\$2.60	\$182.00
646.102	Marking Line Epoxy 4-Inch	LF	2993	\$0.90	\$2,693.70	\$0.90	\$2,693.70	\$0.90	\$2,693.70
646.302	Marking Line Epoxy 8-Inch	LF	493	\$1.90	\$936.70	\$1.90	\$936.70	\$1.90	\$936.70
646.502	Marking Arrow Epoxy	EACH	8	\$230.00	\$1,840.00	\$230.00	\$1,840.00	\$230.00	\$1,840.00
646.512	Marking Word Epoxy	EACH	2	\$240.00	\$480.00	\$240.00	\$480.00	\$240.00	\$480.00
646.612	Marking Stop Line Epoxy 18-Inch	LF	135	\$12.00	\$1,620.00	\$12.00	\$1,620.00	\$12.00	\$1,620.00
646.742	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	130	\$10.00	\$1,300.00	\$10.00	\$1,300.00	\$10.00	\$1,300.00
646.9	Marking Removal Line 4-Inch	LF	3064	\$0.15	\$459.60	\$0.40	\$1,225.60	\$0.15	\$459.60
646.93	Marking Removal Special Marking	EACH	4	\$100.00	\$400.00	\$100.00	\$400.00	\$100.00	\$400.00
652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1498	\$9.23	\$13,826.54	\$9.23	\$13,826.54	\$10.72	\$16,058.56
652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	863	\$12.79	\$11,037.77	\$12.79	\$11,037.77	\$15.40	\$13,290.20
652.0615	Conduit Special 3-Inch	LF	688	\$22.07	\$15,184.16	\$22.07	\$15,184.16	\$30.96	\$21,300.48
652.08	Conduit Loop Detector	LF	1334	\$7.28	\$9,711.52	\$7.28	\$9,711.52	\$9.63	\$12,846.42
653.0135	Pull Boxes Steel 24x36-Inch	EACH	7	\$970.50	\$6,793.50	\$970.50	\$6,793.50	\$1,040.16	\$7,281.12
653.014	Pull Boxes Steel 24x42-Inch	EACH	14	\$1,034.50	\$14,483.00	\$1,034.50	\$14,483.00	\$1,112.52	\$15,575.28
653.0905	Removing Pull Boxes	EACH	3	\$139.00	\$417.00	\$139.00	\$417.00	\$105.48	\$316.44
654.0101	Concrete Bases Type 1	EACH	6	\$822.00	\$4,932.00	\$822.00	\$4,932.00	\$797.09	\$4,782.54
654.0102	Concrete Bases Type 2	EACH	1	\$1,075.00	\$1,075.00	\$1,075.00	\$1,075.00	\$1,011.97	\$1,011.97
654.011	Concrete Bases Type 10	EACH	1	\$5,328.00	\$5,328.00	\$5,328.00	\$5,328.00	\$5,076.90	\$5,076.90

654.012	Concrete Bases Type 10-Special	EACH	3	\$6,151.00	\$18,453.00	\$6,151.00	\$18,453.00	\$8,200.28	\$24,600.84
654.0217	Concrete Control Cabinet Bases Type 9 Special	EACH	1	\$1,834.50	\$1,834.50	\$1,834.50	\$1,834.50	\$1,699.78	\$1,699.78
655.021	Cable Traffic Signal 3-14 AWG	LF	1240	\$1.12	\$1,388.80	\$1.12	\$1,388.80	\$1.33	\$1,649.20
655.023	Cable Traffic Signal 5-14 AWG	LF	419	\$1.38	\$578.22	\$1.38	\$578.22	\$1.60	\$670.40
655.024	Cable Traffic Signal 7-14 AWG	LF	2212	\$1.73	\$3,826.76	\$1.73	\$3,826.76	\$2.20	\$4,866.40
655.026	Cable Traffic Signal 12-14 AWG	LF	1252	\$2.49	\$3,117.48	\$2.49	\$3,117.48	\$3.16	\$3,956.32
655.032	Cable Type UF 2-10 AWG Grounded	LF	1731	\$2.12	\$3,669.72	\$2.12	\$3,669.72	\$1.83	\$3,167.73
655.0515	Electrical Wire Traffic Signals 10 AWG	LF	2607	\$1.13	\$2,945.91	\$1.13	\$2,945.91	\$1.18	\$3,076.26
655.061	Electrical Wire Lighting 12 AWG	LF	1017	\$0.77	\$783.09	\$0.77	\$783.09	\$1.07	\$1,088.19
655.07	Loop Detector Lead in Cable	LF	7132	\$1.52	\$10,840.64	\$1.52	\$10,840.64	\$1.67	\$11,910.44
655.08	Loop Detector Wire	LF	4263	\$1.14	\$4,859.82	\$1.14	\$4,859.82	\$1.07	\$4,561.41
655.09	Traffic Signal EVP Detector Cable	LF	1240	\$1.33	\$1,649.20	\$1.33	\$1,649.20	\$1.35	\$1,674.00
657.01	Pedestal Bases	EACH	6	\$193.80	\$1,162.80	\$193.80	\$1,162.80	\$293.03	\$1,758.18
657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	1	\$393.00	\$393.00	\$393.00	\$393.00	\$470.14	\$470.14
657.031	Poles Type 3	EACH	1	\$3,037.80	\$3,037.80	\$3,037.80	\$3,037.80	\$3,359.92	\$3,359.92
657.042	Traffic Signal Standards Aluminum 13-FT	EACH	1	\$503.00	\$503.00	\$503.00	\$503.00	\$794.07	\$794.07
657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	5	\$603.00	\$3,015.00	\$603.00	\$3,015.00	\$905.08	\$4,525.40
657.0609	Luminaire Arms Single Member 4-Inch Clamp 6-FT	EACH	1	\$220.50	\$220.50	\$220.50	\$220.50	\$268.63	\$268.63
658.0173	Traffic Signal Face 3S 12-Inch	EACH	12	\$747.60	\$8,971.20	\$747.60	\$8,971.20	\$748.58	\$8,982.96
658.0174	Traffic Signal Face 4S 12-Inch	EACH	8	\$1,019.80	\$8,158.40	\$1,019.80	\$8,158.40	\$941.39	\$7,531.12
658.0416	Pedestrian Signal Face 16-Inch	EACH	2	\$521.20	\$1,042.40	\$521.20	\$1,042.40	\$472.99	\$945.98
658.5069.01	Signal Mounting Hardware (location) (STH 120 & BLOOMFIELD)	LS	1	\$4,779.50	\$4,779.50	\$4,779.50	\$4,779.50	\$4,357.95	\$4,357.95
659.1125	Luminaires Utility LED C	EACH	8	\$270.40	\$2,163.20	\$270.40	\$2,163.20	\$455.32	\$3,642.56
690.015	Sawing Asphalt	LF	1549	\$1.15	\$1,781.35	\$3.00	\$4,647.00	\$2.05	\$3,175.45
690.025	Sawing Concrete	LF	1074	\$2.05	\$2,201.70	\$6.00	\$6,444.00	\$1.15	\$1,235.10
SPV.0060.01	Special (Curb Ramp Grading, Shaping, and Finishing)	EACH	2	\$628.25	\$1,256.50	\$800.00	\$1,600.00	\$800.00	\$1,600.00
SPV.0060.03	Special (Transport and Install Poles Type 9)	EACH	1	\$1,250.50	\$1,250.50	\$1,250.50	\$1,250.50	\$1,141.18	\$1,141.18
SPV.0060.05	Special (Transport and Install Poles Type 10 Special)	EACH	3	\$1,250.50	\$3,751.50	\$1,250.50	\$3,751.50	\$1,292.81	\$3,878.43
SPV.0060.06	Special (Transport and Install Monotube Arms 30-FT)	EACH	1	\$2,190.00	\$2,190.00	\$2,190.00	\$2,190.00	\$1,380.46	\$1,380.46
SPV.0060.07	Special (Transport and Install Monotube Arms 40-FT)	EACH	1	\$2,345.00	\$2,345.00	\$2,345.00	\$2,345.00	\$1,683.72	\$1,683.72
SPV.0060.08	Special (Transport and Install Monotube Arms 45-FT)	EACH	1	\$2,500.00	\$2,500.00	\$2,500.00	\$2,500.00	\$1,835.35	\$1,835.35
SPV.0060.09	Special (Transport and Install Luminaire Arms Steel 15-FT)	EACH	3	\$378.00	\$1,134.00	\$378.00	\$1,134.00	\$269.52	\$808.56
SPV.0060.10	Special (Removing Controller Cabinet)	EACH	1	\$558.00	\$558.00	\$558.00	\$558.00	\$412.24	\$412.24
SPV.0060.51	Special (Adjusting Sanitary Manhole)	EACH	1	\$1,125.00	\$1,125.00	\$1,125.00	\$1,125.00	\$1,438.00	\$1,438.00
SPV.0060.52	Special (Adjusting Water Valve Boxes)	EACH	2	\$495.00	\$990.00	\$495.00	\$990.00	\$312.00	\$624.00
SPV.0060.11	Special (Transport and Install Monotube Arms 35-FT)	EACH	1	\$2,267.50	\$2,267.50	\$2,267.50	\$2,267.50	\$808.70	\$808.70
SPV.0075.01	Special (Pavement Cleanup Project)	HRS	16	\$160.00	\$2,560.00	\$150.00	\$2,400.00	\$210.00	\$3,360.00
SPV.0105.01	Special (Transport and Install State Furnished EVP Detector Heads with Confirmation Beacons [STH 120 & Bloomfield])	LS	1	\$1,688.00	\$1,688.00	\$1,688.00	\$1,688.00	\$2,584.72	\$2,584.72
SPV.0105.02	Special (Transport and Install State Furnished Radar Detection System [STH 120 & Bloomfield])	LS	1	\$2,184.20	\$2,184.20	\$2,184.20	\$2,184.20	\$3,733.08	\$3,733.08
SPV.0105.04	Special (Transport and Install State Furnished Traffic Signal Cabinet [STH 120 & Bloomfield])	LS	1	\$3,782.80	\$3,782.80	\$3,782.80	\$3,782.80	\$7,398.53	\$7,398.53
SPV.0105.05	Special (Transport and Install State Furnished Audible Pedestrian Signal System [STH 120 & Bloomfield])	LS	1	\$1,834.20	\$1,834.20	\$1,834.20	\$1,834.20	\$1,266.53	\$1,266.53
SPV.0180.01	Special (Restore Disturbed Areas)	SY	1899	\$6.75	\$12,818.25	\$9.50	\$18,040.50	\$6.75	\$12,818.25
TOTAL BASE BID				\$527,728.72		\$708,286.81		\$717,123.96	

9', MTE D-SERIES, MILD STEEL, 3-4 YD CAPACITY, FOLDING SIDE, DUMP BODY

- 3/16" FLOOR, 12 GA. SIDES & 10 GA. ENDS, 16" H SIDES, 22" H TAILGATE

- 50,000 PSI YIELD STRENGTH STEEL CONSTRUCTION

- HEAVY DUTY FRONT BULKHEAD WITH TAPERED LASER CUT WINDOW & INTEGRAL 12" TAPERED CAB SHIELD (GM MEDIUM-DUTY BODY TO HAVE FULL-WIDTH SQUARE CAB SHIELD IN LIEU OF TAPERED)

- INTERNAL DIRT SHEDDING TOP RAILS & TAILGATE

- WESTERN-STYLE UNDERSTRUCTURE WITH 10 GAUGE LONG-MEMBERS

- SINGLE-LEVER RELEASE, QUICK DROP TAILGATE

- (2) UNDERBODY TIE LOOPS

- L.E.D. FMVSS108 LIGHTS & REFLECTORS

- RUBBER REAR FLAPS

- UNDERCOATED & 100% DURABLE POWDER COATED

Z-DUMP PRO PACKAGE

- 2-1/2" RECEIVER IN 1/2" PLATE (1800 TONGUE CAPACITY / 18,000 TOWING CAPACITY)

- 7-WAY, RV STYLE TRAILER RECEPTACLE

DOUBLE-ACTING ELECTRIC SUB-FRAME HOIST (CHAMPION)

INSTALL FACTORY BACKUP CAMERA - GREATER THAN 10,000 GVW (MUST COME FROM FACTORY LOOSE - DOES NOT COVER CAMERA THAT WAS REMOVED BY CUSTOMER & SENT LOOSE)

AFTERMARKET BACKUP ALARM

CONNECT BACKUP ALARM TO UPFITTER SWITCH



BILL OF SALE

Salesperson: Chris Walters

Purchaser:	City Of Lake Geneva	Phone:	
Co-Purchaser:		Phone:	
Street Address:	1065 Carey St		
City:	Lake Geneva	State:	WI
Zip Code:	53147	County:	Walworth
Email Address:	tearle@cityoflakegeneva.com		

☐ New ☐ Used

Stock #: 01T411

Date of Order: 02/09/2022

☐ Finance ☐ Cash ☐ Lease

Anticipated Delivery Date: 02/09/2022

	Year	Make	Model	Color	Miles	Vin Number
Purchased	2022	Ford	Super Duty F-350 DRW	Oxford Whi	5	1FDRF3HN2NDA01735
Trade In						
2nd Trade						

Other Conditions of Sale:

☐ **THE ORDERED VEHICLE MUST BE LOCATED**
Mileage on Delivery will not exceed: _____
Desired trim, options, and color configuration
agreed upon and attached to this buyers order.
Order Non-Cancelable and Deposit Non-Refundable
if dealer locates vehicle and customer fails to take
delivery of vehicle.

The appraisal of the trade in(s) is based on an
odometer reading of up to _____ miles, and
the trade in may be reappraised if it exceeds this limit.

**No oral representations are binding unless
written on this form. This document
supersedes any prior agreements and
representations, regarding the transaction.**
USED VEHICLE ONLY: "The information you see on the
window form for this vehicle is part of this contract.
Information on window form overrides any contrary
provisions in the contract of sale."
**NO PUBLIC LIABILITY, PROPERTY DAMAGE,
OR PHYSICAL DAMAGE INSURANCE ISSUED.**

MSRP/Retail Price:

\$ 75,837.00

Discount:

(\$ 18,944.00)

Trade Allowance:

(\$ 0.00)

Rebates:

(\$)

Cash Difference:

\$ 56,893.00

Dealer Added Options:

\$

\$

\$

\$

\$

Subtotal w/ Added Options:

\$ 56,893.00

Dealer Service Fee:

\$ 399.00

State E-File Fee:

\$ 19.50

Sales Tax (

%Tax Rate):

\$ 0.00

Title/License Fees:

\$ 172.50

Payoff:

\$ 0.00

Total:

\$ 57,484.00

Deposit on Order:

(\$)

Additional Cash Down Due:

(\$)

Amount Financed/Due:

\$ 57,484.00

Purchaser Signature:		Date Signed:	02/09/2022	Time Signed:	02:32 PM	AM PM
Co-Purchaser Signature:		Date Signed:	02/09/2022	Time Signed:	02:32 PM	AM PM
Dealer Signature		Date Signed:	02/09/2022	Time Signed:	02:32 PM	AM PM



Knapheide Equipment Co - Chicago
2600 IL-120
McHenry IL 60051
Phone: 815-385-2600
Fax:

QUOTATION

Quote ID: RA00000001

Page 1 of 2

Customer: KUNES COUNTRY FORD-L-M:DELAVAN

Quote Number: RA00000001

Quote Date: 2/9/2022

Quote valid until: 2/16/2022

Contact: CHRIS WALTERS

Phone:

Fax:

By: Prepared radams

Salesperson: RICH ADAMS

PO#:

Enduser: EnduserCust

Make:	Model:	Year:	Single/Dual:
Cab Type:	Wheelbase:	Cab-to-Axle:	VIN:

QTY	PART NUMBER	DESCRIPTION	UNIT PRICE	AMOUNT
1	WS 76901	WESTERN BLADE ASY 9' PP W/QUAD ASSY = BLADE EDGE SHOES	\$6,825.00	\$6,825.00
Quote Total:				\$6,825.00
Discount:				\$0.00
Sales Tax:				\$0.00
Total Due:				\$6,825.00

The following options may be added:

QUANTITY	DESCRIPTION	PRICE EACH	AMOUNT	ADD TO QUOTE
				Yes / No

Notes:

9' WESTERN PLOW
PRO PLUS
CAB COMMAND
INSTALLED

MUNI DISCOUNT INCLUDED

This Quote is subject to the following terms and conditions:

Credit Card Policy

Pricing Policy

- Price Quotation is good on orders received through the expiration date.
- Pricing quoted applies to chassis make/model originally provided and quantity quoted. Any change may result in price change.
- Orders are subject to all applicable state, local and federal excise taxes. Applicable taxes will be applied on final billing to customer upon completion of order.

Payment Policy

- Payment Terms are due upon receipt of signed quote unless prior credit agreement has been established at the time of order.
- Payment terms for customers with an established credit account will be Net 30 from date of invoice.
- Knapheide has right to assess late charges at 1.5% per month on all invoices that are 60 days or more past due.

Return Policy

- All sales are final. Purchased parts or products are non returnable.

Cancellation Policy

City of Lake Geneva, Wisconsin
Equipment Replacement Fund
2022 thru 2026

PROJECTS BY DEPARTMENT - EQUIPMENT REPLACEMENT FUND
FUNDED BY TAX LEVY AND FUND BALANCE RESERVES IN EQUIPMENT REPLACEMENT ACCOUNT

Department	2022	2023	2024	2025	2026	TOTAL
City Hall and Administration						
Accounting Software - carryover from 2021	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000
Access door security system - carryover from 2021	25,000					25,000
Copiers (2) - City Hall & Municipal Court	10,000					10,000
Telephone System - City Wide	50,000					50,000
Museum Furnaces (2)		20,000		65,000		20,000
Boilers (4)						65,000
Subtotal	95,000	20,000	-	65,000	-	180,000
Museum						
Furnaces (2)	20,000					20,000
Subtotal	20,000	-	-	-	-	20,000
Cemetery						
Xtreme Leaf Vacuum - Cemetery	12,000					12,000
4 x 4 1 Ton Dump Truck with Box and Plow - Cemetery	60,000					60,000
Subtotal	72,000	-	-	-	-	72,000
Emergency Government						
Siren - #6			30,000			30,000
Siren - #5			30,000			30,000
Subtotal	-	-	30,000	-	-	30,000
Department of Public Works						
Leaf Vac Replacement - carryover from 2021	70,000					70,000
Pelican Vacuum Street Sweeper		200,000				200,000
IHC Garbage Truck 4900		120,000				120,000
Bobcat Skid Steer S 205			125,000			125,000
1-Ton Ford F 550			70,000			70,000
1-Ton Ford F 550			70,000			70,000
5-Yard International			195,000			195,000
IHC Garbage Truck 4900			120,000			120,000
John Deere Turbo Mower Rider #37			65,000			65,000
5-Yard International				200,000		200,000
SnoGo WK800 Blower w/Loader				150,000		150,000
John Deere loader				270,000		270,000
Kubota RTV100					35,000	35,000
Line Painter					8,000	8,000
IHC 4300 Bucket Truck					225,000	225,000
Rhino Pull Behind Mower					22,000	22,000
Subtotal	70,000	320,000	645,000	620,000	290,000	1,945,000
Fire Department						
Turnout Gear - (10) Sets per Year	37,739	39,626	41,608	43,688	45,872	208,533
Communications Equipment	36,625	38,457	40,380	42,399	44,518	202,379
SCBA & Masks	334,700					334,700
APRs (Gas Masks)	20,000					20,000
Car #3 (2011) Transfer from PD Changeover		5,000				5,000
Car #4 (2016) Transfer from PD Changeover		5,000				5,000
Utility #1 (2001)		68,000				68,000
Ambulance #3 (2005)			350,000			350,000
Ambulance #3 Equipment			39,000			39,000
Washer/Extractor			11,000			11,000
Engine #1 Replacement (2002)				775,000		775,000
Engine #1 Equipment				48,000		48,000
MCI/Rehab Trailer					100,000	100,000
Subtotal	429,064	156,083	481,988	909,087	190,390	2,166,612



BILL OF SALE

Salesperson: Chris Walters

Purchaser:	City Of Lake Geneva		Phone:	
Co-Purchaser:			Phone:	
Street Address:	1065 Carey St			
City:	Lake Geneva	State:	WI	Zip Code: 53147
Email Address:	tearle@cityoflakegeneva.com			
County:	Walworth			

☐ New ☐ Used

Stock #: 01T411

Date of Order: 02/09/2022

☐ Finance ☐ Cash ☐ Lease

Anticipated Delivery Date: 02/09/2022

	Year	Make	Model	Color	Miles	Vin Number
Purchased	2022	Ford	Super Duty F-350 DRW	Oxford White	5	1FDRF3HN2NDA01735
Trade In						
2nd Trade						

Other Conditions of Sale:

☐ **THE ORDERED VEHICLE MUST BE LOCATED**
Mileage on Delivery will not exceed: _____
Desired trim, options, and color configuration
agreed upon and attached to this buyers order.
Order Non-Cancelable and Deposit Non-Refundable
if dealer locates vehicle and customer fails to take
delivery of vehicle.

The appraisal of the trade in(s) is based on an
odometer reading of up to _____ miles, and
the trade in may be reappraised if it exceeds this limit.

No oral representations are binding unless
written on this form. This document
supersedes any prior agreements and
representations, regarding the transaction.
USED VEHICLE ONLY: "The information you see on the
window form for this vehicle is part of this contract.
Information on window form overrides any contrary
provisions in the contract of sale."
NO PUBLIC LIABILITY, PROPERTY DAMAGE,
OR PHYSICAL DAMAGE INSURANCE ISSUED.

MSRP/Retail Price:	\$	\$75,837.00
Discount:	(\$	\$18,944.00)
Trade Allowance:	(\$	\$0.00)
Rebates:	(\$	)
Cash Difference:	\$	\$56,893.00
Dealer Added Options:		
	\$	
	\$	
	\$	
	\$	
	\$	
Subtotal w/ Added Options:	\$	\$56,893.00
Dealer Service Fee:	\$	\$399.00
State E-File Fee:	\$	\$19.50
Sales Tax (%Tax Rate):	\$	\$0.00
Title/License Fees:	\$	\$172.50
Payoff:	\$	\$0.00
Total:	\$	\$57,484.00
Deposit on Order:	(\$	)
Additional Cash Down Due:	(\$	)
Amount Financed/Due:	\$	\$57,484.00

Purchaser Signature:		Date Signed:	02/09/2022	Time Signed:	02:32 PM	AM PM
Co-Purchaser Signature:		Date Signed:	02/09/2022	Time Signed:	02:32 PM	AM PM
Dealer Signature:		Date Signed:	02/09/2022	Time Signed:	02:32 PM	AM PM

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12/16/

1FDRF3HN2

NDA01735

NB

BU09



Go Further

ford.com

VEHICLE DESCRIPTION

SUPER DUTY

2022 F350 DRW 4X4 REG CHAS
XL 145 1/2 CHASSIS CAB
7.3L DIESEL NA FIVE V8 ENGINE
10-SPEED AUTOMATIC

EXTERIOR
OXFORD WHITE
INTERIOR
MEDIUM EARTH GRAY VINYL

ND A01735

EPA
DOT

Fuel Economy and Environment

FUEL ECONOMY RATINGS NOT REQUIRED ON THIS VEHICLE

STANDARD EQUIPMENT INCLUDED AT NO EXTRA CHARGE

EXTERIOR

- HEADLAMPS - AUTOLAMP (ON/OFF)
- HEADLAMPS - AMPER ACTIVATED
- ROOF CLEARANCE LIGHTS
- TOW HOOKS
- TRAILER SWAY CONTROL
- TRAILER TOW WIRE HARNESS
- WIPERS - INTERMITTENT

INTERIOR

- AIR COND, MANUAL FRONT
- BLACK VINYL FLOOR COVERING
- OUTSIDE TEMP DISPLAY
- PARTICULATE AIR FILTER
- STEERING - TELESCOPIC WHEEL WITH AUDIO
- UPFITTER SWITCHES
- VINYL SUN VISORS

FUNCTIONAL

- 4-WHEEL ANTILOCK BRAKE SYS
- ELECT 4X4 SHIFT-ON-FLY
- FORDPASS™ CONNECT 4G-WIFI
- HOTSPOT TELEMATICS MODEM
- HILL START ASSIST
- JEWEL EFFECT HEADLAMPS
- MANUAL LOCKING HUBS
- MONO BEAM COIL SPRING FRT
- SUSPENSION W/STAB BAR
- STABILIZER BAR, FRONT/REAR
- SYNC3 WITH APPLELINK

SAFETY/SECURITY

- ADVANCETRAC® WITH RSC®
- AIRBAGS - SAFETY CANOPY®
- BELT-MINDER CHIME
- DRIVER/PASSENGER AIR BAGS
- SOS POST-CRASH ALERT SYS™

WARRANTY

- 3YR/35,000 BUMPER / BUMPER
- 5YR/60,000 POWERTRAIN
- 5YR/100,000 DIESEL ENGINE

INCLUDED ON THIS VEHICLE

(MSRP)

OPTIONAL EQUIPMENT/OTHER

- PREFERRED EQUIPMENT PKG.040A
- 7.3L DIESEL NA FIVE V8 ENGINE
- 10-SPEED AUTOMATIC
- LT246/75R17E 65W ALL-WEATHER
- 4.30 RATIO LIMITED SLIP AXLE
- POWER EQUIPMENT GROUP
- TELESCOPIC TTY MIRR-PWR/HTD 880
- FRONT LICENSE PLATE BRACKET
- ALUMINUM PACKAGE
- PLATFORM RUNNING BOARDS
- 140000 GVWR PACKAGE
- ENGINE BLOCK HEATER
- 90 STATE EMISSIONS
- 110V/200V OUTLET
- SNOW PLOW PREP PACKAGE
- SPARE TIRE AND WHEEL DELETE
- TRAILER BRAKE CONTROLLER
- JACK
- UTILITY LIGHTING SYSTEM
- 48 GAL/APT OF AXLE FUEL TANK
- 50% AMP ALTERNATOR
- DUAL BATTERY
- REAR VIEW CAMERA & PREP KIT
- DAYTIME RUNNING LIGHTS
- XL VALUE PACKAGE
- CRUISE CONTROL

NO CHARGE

108.00

850.00

915.00

NO CHARGE

NO CHARGE

820.00

100.00

NO CHARGE

175.00

250.00

85.00

270.00

55.00

160.00

NO CHARGE

115.00

NO CHARGE

415.00

45.00

395.00

PRICE INFORMATION

BASE PRICE

(MSRP)

\$40,525.00

TOTAL OPTIONS/OTHER

\$250.00

TOTAL VEHICLE & OPTIONS/OTHER

\$40,775.00

DESTINATION & DELIVERY

\$1,095.00

fuelconomy.gov

Calculate personalized estimates and compare vehicles.



The FordPass Connect™ modem is active and sending vehicle data (e.g., diagnostics) to Ford. See In-Vehicle Settings for connectivity options.

FordPass Connect™ service and features™ App required for certain remote features (See App/Truck for more information). Connected service and related features functions may be subject to compatible AT/PA equipment, enabling, disabling technology / cellular networks may affect functionality and availability, or continued provision of some features, prohibiting them from functioning. Message and data rates may apply. See your local Ford website for our privacy policy.



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WARNING: Operating, servicing and maintaining a passenger vehicle, pickup truck, van, or off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.P85Warnings.ca.gov/passenger-vehicle.

CALL 800-222-2222 TO 800-222-2222



This label is affixed pursuant to the Federal Automobile Information Disclosure Act. Gasoline, License, and Title Fees, State and Local taxes are not included. Dealer installed options or accessories are not included unless listed above.

Whether you decide to lease or finance your vehicle, you'll find the choices that are right for you. See your dealer for details or visit www.ford.com/finance.

SPECIAL ORDER
R172 R 6B 2A1 230 000000 10 18 21

11/30/2021

9', MTE D-SERIES, MILD STEEL, 3-4 YD CAPACITY, FOLDING SIDE, DUMP BODY

- 3/16" FLOOR, 12 GA. SIDES & 10 GA. ENDS, 16" H SIDES, 22" H TAILGATE

- 50,000 PSI YIELD STRENGTH STEEL CONSTRUCTION

- HEAVY DUTY FRONT BULKHEAD WITH TAPERED LASER CUT WINDOW & INTEGRAL 12" TAPERED CAB SHIELD (GM MEDIUM-DUTY BODY TO HAVE FULL-WIDTH SQUARE CAB SHIELD IN LIEU OF TAPERED)

- INTERNAL DIRT SHEDDING TOP RAILS & TAILGATE

- WESTERN-STYLE UNDERSTRUCTURE WITH 10 GAUGE LONG-MEMBERS

- SINGLE-LEVER RELEASE, QUICK DROP TAILGATE

- (2) UNDERBODY TIE LOOPS

- L.E.D. FMVSS108 LIGHTS & REFLECTORS

- RUBBER REAR FLAPS

- UNDERCOATED & 100% DURABLE POWDER COATED

Z-DUMP PRO PACKAGE

- 2-1/2" RECEIVER IN 1/2" PLATE (1800 TONGUE CAPACITY / 18,000 TOWING CAPACITY)

- 7-WAY, RV STYLE TRAILER RECEPTACLE

DOUBLE-ACTING ELECTRIC SUB-FRAME HOIST (CHAMPION)

INSTALL FACTORY BACKUP CAMERA - GREATER THAN 10,000 GVW (MUST COME FROM FACTORY LOOSE - DOES NOT COVER CAMERA THAT WAS REMOVED BY CUSTOMER & SENT LOOSE)

AFTERMARKET BACKUP ALARM

CONNECT BACKUP ALARM TO UPFITTER SWITCH



Knapheide Equipment Co - Chicago
2600 IL-120
McHenry IL 60051
Phone: 815-385-2600
Fax:

QUOTATION

Quote ID: RA00000001

Page 1 of 2

Customer: KUNES COUNTRY FORD-L-M:DELAVAN

Quote Number: RA00000001

Quote Date: 2/9/2022

Quote valid until: 2/16/2022

Contact: CHRIS WALTERS

Phone:

Fax:

By:

Prepared radams

Salesperson: RICH ADAMS

PO#:

Enduser: EnduserCust

Make:	Model:	Year:	Single/Dual:
Cab Type:	Wheelbase:	Cab-to-Axle:	VIN:

QTY	PART NUMBER	DESCRIPTION	UNIT PRICE	AMOUNT
1	WS 76901	WESTERN BLADE ASY 9' PP W/QUAD ASSY = BLADE EDGE SHOES	\$6,825.00	\$6,825.00

Quote Total: \$6,825.00

Discount: \$0.00

Sales Tax: \$0.00

Total Due: \$6,825.00

The following options may be added:

QUANTITY	DESCRIPTION	PRICE EACH	AMOUNT	ADD TO QUOTE
				Yes / No

Notes:

9' WESTERN PLOW
PRO PLUS
CAB COMMAND
INSTALLED

MUNI DISCOUNT INCLUDED

This Quote is subject to the following terms and conditions:

Credit Card Policy

Pricing Policy

- Price Quotation is good on orders received through the expiration date.
- Pricing quoted applies to chassis make/model originally provided and quantity quoted. Any change may result in price change.
- Orders are subject to all applicable state, local and federal excise taxes. Applicable taxes will be applied on final billing to customer upon completion of order.

Payment Policy

- Payment Terms are due upon receipt of signed quote unless prior credit agreement has been established at the time of order.
- Payment terms for customers with an established credit account will be Net 30 from date of invoice.
- Knapheide has right to assess late charges at 1.5% per month on all invoices that are 60 days or more past due.

Return Policy

- All sales are final. Purchased parts or products are non returnable.

Cancellation Policy

\$ 6825



306 W. State St.
Janesville, WI 53546-2556

(608) 754-6608 (800) 458-1123
fax: (608) 754-0675
www.NorthlandEquipment.com

Quote

#: 0076122

Date: 2/11/2022

Created By: JAS

Salesperson: JOE

Customer #: COLG

Sold To:

CITY OF LAKE GENEVA
626 GENEVA ST
Lake Geneva, WI 53147

Ship To:

CITY OF LAKE GENEVA
626 GENEVA ST
Lake Geneva, WI 53147

Confirm To:			Customer P.O.:	Terms: Net due on receipt of goods	
Ordered	Unit	Item Number	Description	Price	Amount
1.00	EACH	/SALES PLOW	Plows and Spreaders Sales 3030	7,142.00	7,142.00
			WESTERN ULTRAMOUNT2 PRO PLUS SNOW PLOW PACKAGE		
			MODEL # IUTPP90 - 9' WESTERN ULTRAMOUNT2 PRO PLUS		
			31 1/2" BLADE HEIGHT - 12 GAUGE STEEL MOLBOARD		
			4 TRIP SPRINGS - 2 SHOCK ABSORBERS - 8 VERTICAL RIBS		
			LIFT CHAIN SYSTEM - NIGHT HAWK HALOGEN LIGHT - FLEET FLEX		
			NECO RUBBER DEFLECTOR - STANDARD SHOE KIT		
			ALL COMPONENTS INSTALLED		
			F.O.B. JANESVILLE, WI		

\$ 7142.00

QUOTE VALID FOR 7 DAYS

060691 - GOVT

WI Exemption Sales (no tax)

Net Order:	7,142.00
Less Discount:	0.00
Freight:	0.00
Sales Tax:	0.00
Order Total:	\$7,142.00
Less Deposit:	0.00
Order Balance:	\$7,142.00

Customer Acceptance: _____ Date: _____ PO#: _____

Signature: I understand that by signing this document I am entering into an agreement with Northland Equipment Co., Inc. for the services, products, and terms stated. Payment due on receipt of goods unless otherwise written. A late payment charge of 1.5% on the past due balance will be assessed monthly. Credit card payments over \$3000.00 are subject to a 3% processing fee. Returns for stock items must be made within 5 business days of receipt. All special order items require written authorization, may be subject to restocking fees, and are at the manufacturer's discretion. Limited Warranty: Northland Equipment Co., Inc. will warranty all in-house workmanship for 90 days unless otherwise written. The warranty work must be completed by Northland Equipment Co., Inc. or its assignees. All products are covered separately by the manufacturer's warranty. Northland Equipment Co., Inc. will not be liable for any other warranties, either expressed or implied, and the warranty of MERCHANTABILITY and the WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE are hereby specifically waived. Under no circumstances will Northland Equipment Co., Inc. be liable for any consequential damages as a result of any defective parts, material or labor supplied by it. Any warranty by a manufacturer of the parts, materials, or devices installed by Northland Equipment Co., Inc., which is different than the warranty stated herein, will be assigned by Northland Equipment Co., Inc. to customer.



Appleton 700 Randolph Drive Appleton, WI 54913 Phone: (920) 687-1111 Fax: (920) 687-1122	Milwaukee 12655 W. Silver Spring Rd Butler, WI 53007 Phone: (262) 544-5404 Fax: (800) 261-0383
---	---

Account: City of Lake Geneva
Name: John Cornue
Address: 361 Main Street
Lake Geneva, WI 53147

Date: 2-23-2022
Email: dpwmech@cityoflakegeneva.com
Phone: (262) 248-2311
Note: _____

**** Sales Quotation ****

1. Western 9'0" Pro Plus Snow Plow

- A. High curve 12 gauge steel blade with 8 vertical ribs, height-31.5"
- B. 4 extension trip springs with two (2) return shock absorbers
- C. Plow cutting width at 31° angle 7'9"
- D. Cutting edge (high carbon 1084 steel) 1/2" x 6"
- E. 1 1/2" x 12" power angle rams
- F. Approximate weight less truck mount 837 lbs
- G. Industry first, optimum strength *power bar* provides exceptional torsional strength and rigidity to eliminate blade twisting often seen in severe use, heavy duty tubular quadrant is built to withstand season after season of commercial use, massive pivot point with 1" diameter pivot bolt to ease nose plate stress
- H. A-frame construction is 3" square tubing for increased strength, high strength steel base channel gives extra support where it is needed most
- I. Ultra mount system: after driving into the receiver brackets simply lock grab handles and plug in two (2) electrical connections
- J. A rotating pivot bar allows the drive in points to remain level-even when the blade is on uneven terrain. You get accurate drive in alignment always and a blade that can pivot when plowing for a cleaner scrape on uneven ground.
- K. Truck frame receiver brackets are easily removed for max. Off season ground clearance
- L. Flo stat hydraulic system designed specifically for snowplow application, provides fast, reliable lifting and angling, uses low pour point hydraulic fluid
- M. Isolation module is the most advanced snowplow light and electrical system featuring improved electrical pins in the harness plugs for trouble free connections. The underhood module improves system life and complies with O.E.M. requirements.
- N. **"Cab Command"** hand-held control: up / down w/ float / left / right / power on / power off
- O. Low profile, dual beam **"Nighthawk"** halogen headlamps with combination park / turn signal lights that conform to federal safety standards. vehicle light switch activates plow lights, no separate in - cab switch is needed
- P. Ultra finish: industry leading climate controlled powder-coat finish
- Q. Furnish Only F.O.B. Casper's

Total: \$6,883.00

Option: Casper's to install above plow

Add: \$550.00

\$ 7433.-

Submitted by: **Tony Myslicki**

All Sales Tax and FET Tax will be added

Quote firm 30 days

Terms: Net 30

By signing below, I agree that I have read, understood, and will comply with the terms of this quote.

Quote accepted by: _____

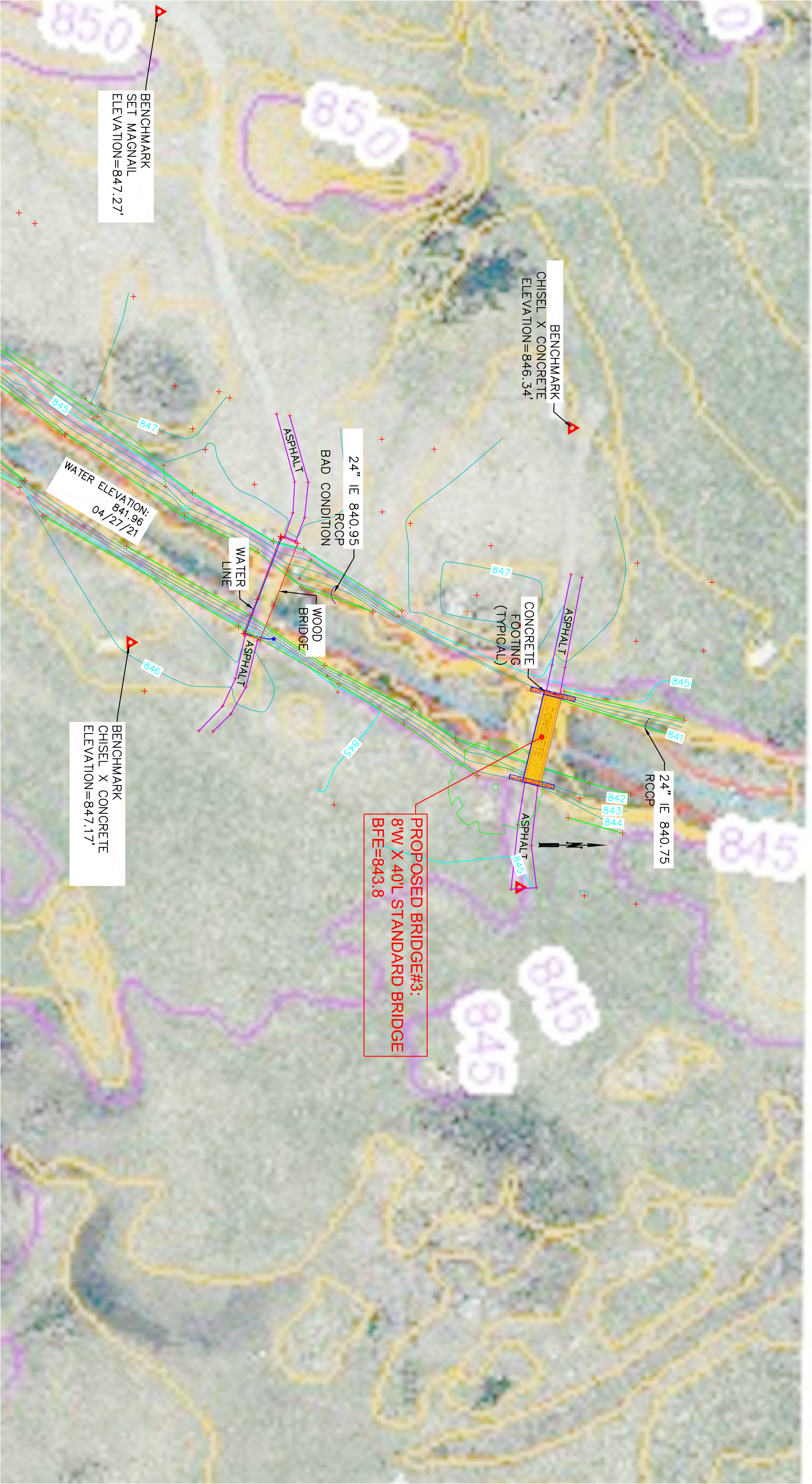
Title: _____ Date Accepted: _____ PO# _____

Thank You for the opportunity to submit our quote for your consideration

City of Lake Geneva, Wisconsin
Equipment Replacement Fund
2022 thru 2026

PROJECTS BY DEPARTMENT - EQUIPMENT REPLACEMENT (FUNDS IN)
FUNDED BY TAX LEVY AND FUND BALANCE RESERVES IN EQUIPMENT REPLACEMENT ACCOUNT

Department	2022	2023	2024	2025	2026	TOTAL
City Hall and Administration						
Accounting Software - carryover from 2021	\$ 10,000	\$ -	\$ -	\$ -	\$ -	10,000
Access door security system - carryover from 2021	25,000					25,000
Copiers (2) - City Hall & Municipal Court	10,000					10,000
Telephone System - City Wide	50,000					50,000
Museum Furnaces (2)		20,000				20,000
Boilers (4)				65,000		65,000
Subtotal	95,000	20,000	-	65,000	-	180,000
Museum						
Furnaces (2)	20,000					20,000
Subtotal	20,000	-	-	-	-	20,000
Cemetery						
Xtreme Leaf Vacuum - Cemetery	12,000					12,000
4 x 4 1 Ton Dump Truck with Box and Plow - Cemetery	60,000					60,000
Subtotal	72,000	-	-	-	-	72,000
Emergency Government						
Siren - #6						-
Siren - #5			30,000			30,000
Subtotal	-	-	30,000	-	-	30,000
Department of Public Works						
Leaf Vac Replacement - carryover from 2021	70,000					70,000
Pelican Vacuum Street Sweeper		200,000				200,000
IHC Garbage Truck 4900		120,000				120,000
Bobcat Skid Steer S 205			125,000			125,000
1-Ton Ford F 550			70,000			70,000
1-Ton Ford F 550			70,000			70,000
5-Yard International			195,000			195,000
IHC Garbage Truck 4900			120,000			120,000
John Deere Turbo Mower Rider #37			65,000			65,000
5-Yard International				200,000		200,000
SnoGo WK800 Blower w/Loader				150,000		150,000
John Deere loader				270,000		270,000
Kubota RTV100					35,000	35,000
Line Painter					8,000	8,000
IHC 4300 Bucket Truck					225,000	225,000
Rhino Pull Behind Mower					22,000	22,000
Subtotal	70,000	320,000	645,000	620,000	290,000	1,945,000
Fire Department						
Turnout Gear - (10) Sets per Year	37,739	39,626	41,608	43,688	45,872	208,533
Communications Equipment	36,625	38,457	40,380	42,399	44,518	202,379
SCBA & Masks	334,700					334,700
APR's (Gas Masks)	20,000					20,000
Car #3 (2011) Transfer from PD Changeover		5,000				5,000
Car #4 (2016) Transfer from PD Changeover		5,000				5,000
Utility #1 (2001)		68,000				68,000
Ambulance #3 (2005)			350,000			350,000
Ambulance #3 Equipment			39,000			39,000
Washer/Extractor			11,000			11,000
Engine #1 Replacement (2002)				775,000		775,000
Engine #1 Equipment				48,000		48,000
MCI/Rehab Trailer					100,000	100,000
Subtotal	429,064	156,083	481,988	909,087	190,390	2,166,612



BENCHMARK
SET MAGNAIL
ELEVATION=847.27'

BENCHMARK
CHISEL X CONCRETE
ELEVATION=846.34'

WATER ELEVATION:
841.96
04/27/21

WATER
LINE

24" IE 840.95
RCCP
BAD CONDITION

WOOD
BRIDGE

CONCRETE
FOOTING
(TYPICAL)

24" IE 840.75
RCCP

PROPOSED BRIDGE#3:
8'W X 40'L STANDARD BRIDGE
BFE=843.8

BENCHMARK
CHISEL X CONCRETE
ELEVATION=847.17'



PRELIMINARY COST ESTIMATE ONLY - DISC BRIDGE #3 & #5 - LAKE GENEVA, WI

ELLENA ENGINEERING CONSULTANTS, LLC

DATE: JANUARY 18, 2022

BY: Mark R. Ellena, PE

BRIDGE #3 - 5'WIDE	DESCRIPTION	UNIT	UNIT COST	QUANTITY	ITEM COST	TOTAL
1	DEMO EXISTING - FOOTINGS REMAIN	LS	\$5,000.00	1	\$5,000	
2	DESIGN & CONSTRUCT FOOTINGS	LS	\$20,000.00	1	\$20,000	
3	DESIGN, SUPPLY AND CONSTRUCT 40' LONG PEDESTRIAN BRIDGE	SF	\$200.00	200	\$40,000	
4	ASPHALT RAMPS	LS	\$10,000.00	1	\$10,000	
	SUBTOTAL				\$75,000	
	CONTINGENCY	%	20		\$15,000	
	TOTAL					\$90,000

BRIDGE #3 - 8'WIDE	DESCRIPTION	UNIT	UNIT COST	QUANTITY	ITEM COST	TOTAL
1	DEMO EXISTING - FOOTINGS REMAIN	LS	\$5,000.00	1	\$5,000	
2	DESIGN & CONSTRUCT FOOTINGS	LS	\$20,000.00	1	\$20,000	
3	DESIGN, SUPPLY AND CONSTRUCT 40' LONG PEDESTRIAN BRIDGE	SF	\$200.00	320	\$64,000	
4	ASPHALT RAMPS	LS	\$10,000.00	1	\$10,000	
	SUBTOTAL				\$99,000	
	CONTINGENCY	%	20		\$19,800	
	TOTAL					\$118,800

BRIDGE #5 - 5'WIDE	DESCRIPTION	UNIT	UNIT COST	QUANTITY	ITEM COST	TOTAL
1	DEMO EXISTING - FOOTINGS REMAIN	LS	\$5,000.00	1	\$5,000	
2	DESIGN & CONSTRUCT FOOTINGS	LS	\$20,000.00	1	\$20,000	
3	DESIGN, SUPPLY AND CONSTRUCT 50' LONG PEDESTRIAN BRIDGE	SF	\$200.00	250	\$50,000	
4	ASPHALT RAMPS	LS	\$10,000.00	1	\$10,000	
	SUBTOTAL				\$85,000	
	CONTINGENCY	%	20		\$17,000	
	TOTAL					\$102,000

BRIDGE #5 - 8'WIDE	DESCRIPTION	UNIT	UNIT COST	QUANTITY	ITEM COST	TOTAL
1	DEMO EXISTING - FOOTINGS REMAIN	LS	\$5,000.00	1	\$5,000	
2	DESIGN & CONSTRUCT FOOTINGS	LS	\$20,000.00	1	\$20,000	
3	DESIGN, SUPPLY AND CONSTRUCT 50' LONG PEDESTRIAN BRIDGE	SF	\$200.00	400	\$80,000	
4	ASPHALT RAMPS	LS	\$10,000.00	1	\$10,000	
	SUBTOTAL				\$115,000	
	CONTINGENCY	%	20		\$23,000	
	TOTAL					\$138,000

Date: July 9, 2003

To: **Systems Planning:** Donna Brown

Program Admin: Bob Anderson, Mike Bub

Information Services: Jim Harris, Laurie Nelson

Trans Planning: Charles Gilbertson

CC: **Systems Operations:**

Highway Maintenance: Tony Barth, James Weiglien

Program Ops: Deb Duquaine, Dick Pfeiffer, Andy Maxwell, Jeff Volz

Traffic Ops: Jim Craft, Fred Petersen, Brian Weinfurth

Sign Shop: Dennis Newton

TOC

Signal Ops

Technical Support

R/W Plat Services: John Prokop

Utilities: Ron Anderson

Projects

Urban Modal

From: Rick Raupp, Program Administration

Subject: Connecting Highway System Change in Walworth County

This memo is for informational purposes only. You need not take any action at this time. Please find enclosed a copy of an executed Connecting Highway System Change for SIH 50 in the City of Lake Geneva. You can contact me at 548-5943 if there are any questions.

Attachments



CORRESPONDENCE MEMORANDUM **State of Wisconsin**
Division of Transportation Infrastructure Development

Date: June 17, 2003

To: Rick Raupp, District 2 Planning

From: Will Anderson, (608.266.8663)
BHD, Design Services

Subject: Connecting Highway Change # 209
City of Lake Geneva, Walworth County
STH 50 from Curtis Street to Cotton Trail

The Administrator of the Division of Transportation Infrastructure Development approved the attached Connecting Highway Change Agreement with the City of Lake Geneva on June 17, 2003. I am returning two copies of the signed agreement for your distribution and your records. Please advise the local unit of government of this approval by sending them a copy of the approved agreement. I will inform other Central Office Sections of the agreement.

Cc: Dennis Hoagland, BHD, Roadway Development, Rm. 651 (original)
Ken Brockman, BHD, Survey and Mapping, Rm. 5B
John Corbin, BHO, Operational Policy Development, Rm. 501
Doug Dalton, BP, Urban Planning Rm. 901
Al Stanek, BP, Intercity Planning Rm. 901
Barb Jenkin, BSHP, STH Data Management, Rm. 901
Kelly Schieldt, BSHP, STH Data Management, Rm. 901
Rex Hinrichs, BSHP, Program Development Rm. 933
Scott Erdman, Data Management BSHP, Rm. 901
Joe Nestler, BSHP, Chief STH Data Management, Rm. 901
Mary Forlenza, BTLR, Local Transportation Program & Finance, Rm. 951

CONNECTING HIGHWAY CHANGE AGREEMENT

BETWEEN

THE WISCONSIN DEPARTMENT OF TRANSPORTATION

AND

THE CITY OF LAKE GENEVA

This agreement, made and entered into by and between the Wisconsin Department of Transportation, hereinafter called the State, and the City of Lake Geneva, hereinafter called the City, provides for the transfer of maintenance responsibility for STH 50, all within the City.

Whereas, Section 86.32(1), Wisconsin Statutes enables the State to designate certain marked routes of the state highway system over the streets or highways in any municipality for which the municipality will be responsible for maintenance and traffic control, and

Whereas, the character of travel service provided by this route, uniformity of maintenance, the effect on the maintaining agency and the municipality's maintenance capability are considerations predicated this designation, and

Whereas, reimbursement for maintenance of the connecting highway shall be determined using the rates per lane mile provided for under Section 86.32, Wisconsin Statutes, and

Whereas, the parties hereto do mutually agree to the change in connecting highway status described below under the conditions as specified below.

ROUTE DESCRIPTION:

Extend the existing Connecting Highway limits easterly along STH 50 from its present location at the intersection of STH 50 and Curtis Street to the easterly limits of the turning radii of the intersection of STH 50 and Cotton Trail, a distance of approximately 1.03 miles, located in Section 31, Township 2 North, Range 18 East, City of Lake Geneva, Walworth County.

CONDITIONS OF DESIGNATION:

1) The State shall:

- A) Relinquish maintenance responsibility for the segment of highway described above in the Route Description on January 1, ~~2003~~ 2004 *re*
- B) Approve and allow the installation of a traffic signal on Edwards Boulevard approximately 600 feet south of its intersection with STH 50.
- C) Approve any land divisions under Trans 233 with three access points onto Edwards Boulevard (STH 120) *For Wal-Mart development only*
- D) Perform a milling, as necessary, and asphalt resurfacing between Edwards Boulevard and Curtis Street as soon as State funds become available but no later than 2005. Work will also include the installation of permanent marking and signage. *OK*
- E) Participate in an expansion of the existing two-lane portion of this segment between Curtis Street and Edwards Boulevard to four lanes in the event the City wishes to proceed. State funding is dependent upon available funds and cost share will be in accordance with current policy. Work shall include street lighting, sidewalks, pavement marking and signage.
- F) Provide the City with four sets of all specifications, diagrams, approved shop drawings and as-built engineering drawings of traffic signals identified in Section 2C.

2) The City shall:

- A) Accept maintenance responsibility for the segment of highway described above in the Route Description on January 1, ~~2003~~ 2004 *re*
- B) Take the actions necessary to ensure that the entire segment of highway to be designated as Connecting Highway shall lie within its corporate limits and furnish copies of such actions to the State prior to January 1, ~~2003~~ 2004 *re*
- C) Execute a separate signal maintenance agreement for the traffic signals located at the intersections of USH 12 eastbound off ramp and STH 50, Edwards Boulevard and STH 50, and Edwards Boulevard and the private drive located 600 feet south of STH 50.
- D) Be responsible for the signal maintenance and operations upon turn on and final inspection of the permanent signals by the State electrical personnel.

APPROVAL

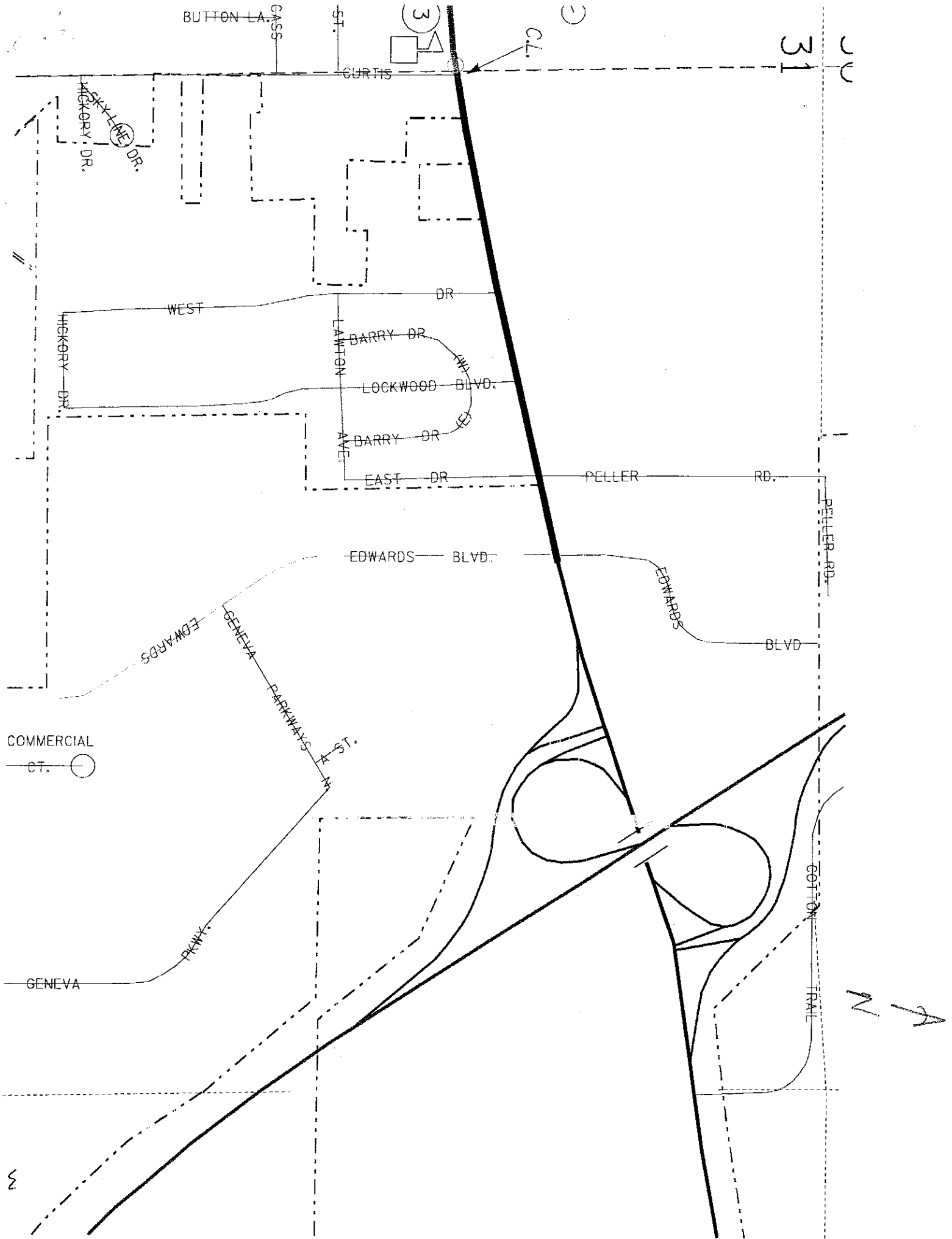
This Agreement is approved and enacted by:

Charles R. Rude, Mayor
Authorized Signature
City of Lake Geneva

10-17-02
Date

Gary C. Whited
Authorized Signature
Wisconsin Department of Transportation

6/17/03
Date



RESOLUTION NO. ~~02~~ 03-11

The Common Council of the City of Lake Geneva does hereby resolve as follows:

WHEREAS, Wisconsin Department of Transportation jurisdictional transfer agreement requires transferring road right-of-way from the Township of Lyons to the City of Lake Geneva;

WHEREAS, the Township of Lyons has tendered a fully executed deed delineating the State 50 right-of-way.

NOW, THEREFORE, BE IT RESOLVED, that the City of Lake Geneva hereby accepts the deed of South 50 Right-of-Way Delineation.

CITY OF LAKE GENEVA

By: Charles C. Rude
Charles Rude, Mayor

ATTEST:

By: Diana Dykstra
Diana Dykstra, Clerk

4-14-03

WisDOT DTSD SER
Planning Unit 4
Ryan Bernard, P.E.
141 NW Barstow St, 2nd Floor
Waukesha, WI 53188

Governor Tony Evers
Secretary Craig Thompson
wisconsindot.gov
Telephone: (262) 548-6471
Email: Ryan.Bernard@dot.wi.gov



January 11, 2022

Mr. Tom Earle:

The following is an update on the status of project ID 3170-09-00 STH 50, City of Lake Geneva (Forest St to Grand Geneva Way). The following project scoping items are being investigated by the Wisconsin Department of Transportation at this time:

- The Department is working to finalize the proposed project pavement scope (i.e. milling and paving depths) using the pavement core data that were just received from WisDOT's SER Soils Unit.
- The Department is reviewing the City's request for expansion between Curtis Street and Edwards Boulevard. Expected completion of the review is to be determined.
- The Department is reviewing the City's request for sidewalk construction between Curtis Street and Edwards Boulevard (regardless of expansion results/pavement scope).
- Drainage items of concern have been reviewed internally at the Department and externally with City staff. The scope of work to be included has been agreed upon.

The Department is seeking input from the City of Lake Geneva on the following project scoping items:

- The Department required cost estimates for specialized signal equipment (non-standard poles) requested by the City for use in the project cost estimate.
- Initial results of the operational analysis using Tuesday count data at STH 120/Edwards Boulevard indicate that intersection operations would be improved by converting the westernmost southbound left turn lane to an additional southbound through lane. The Department is seeking input about possible conflicts with this modification, particularly concerning operations under weekend traffic.

Outcomes of the above investigations will be discussed further at the project Local Officials Meeting (date to be determined). Based on the outcomes of the above scoping items, the SMA between WisDOT and the City of Lake Geneva may need to be updated before final scope certification.

Please let me know if you have any questions regarding the information provided in this memo.

Sincerely,

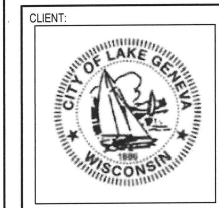
Ryan Bernard, PE
Project Manager
WisDOT – SE Region SPO
(262) 548-6471
Ryan.Bernard@dot.wi.gov



7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



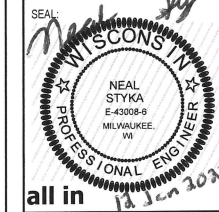
RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 1.0 MI



SHEET:
TITLE SHEET

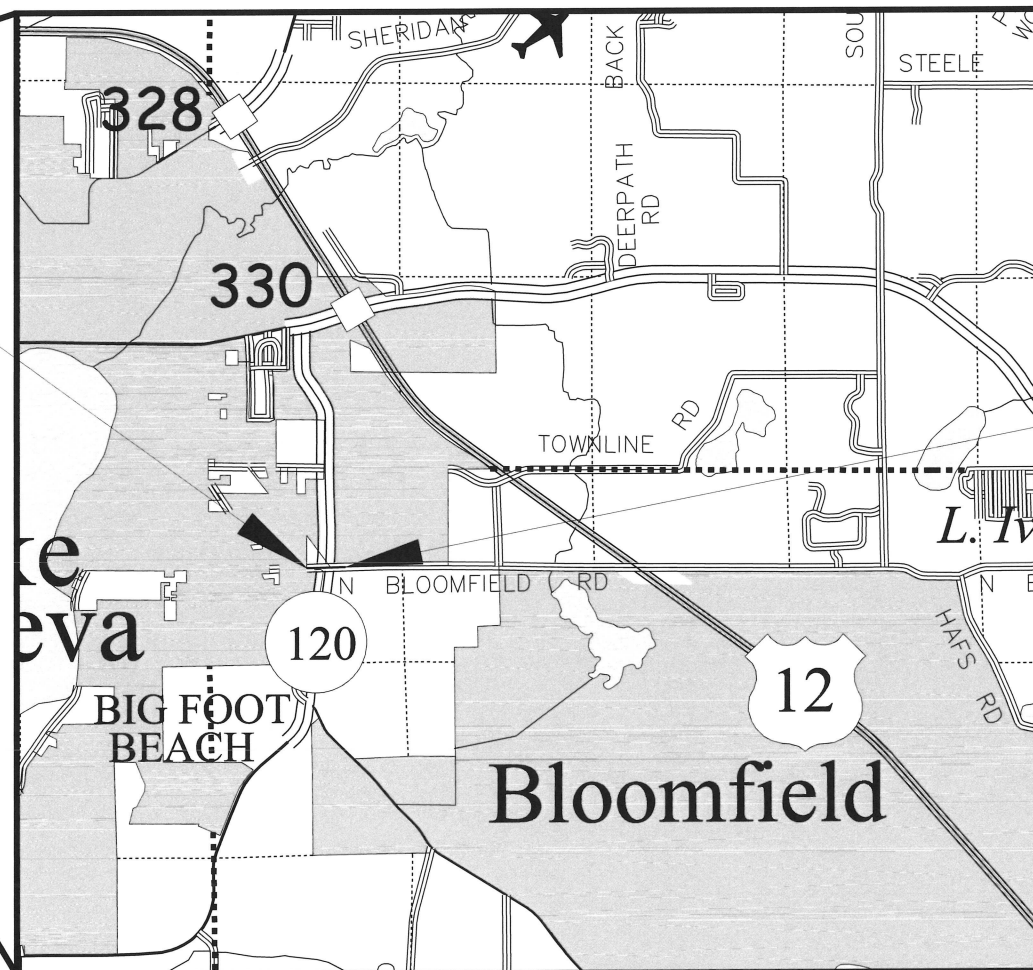
PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:
1

BLOOMFIELD ROAD CITY OF LAKE GENEVA, WALWORTH COUNTY, WISCONSIN



BEGIN PROJECT
STA 200+43.92



END PROJECT
STA 209+95.35

SHEET INDEX

	SHEET NO.
TITLE SHEET	1
GENERAL NOTES	2
PROJECT OVERVIEW	3
EXISTING TYPICAL SECTIONS	4
PROPOSED TYPICAL SECTIONS	5
CONSTRUCTION DETAILS	6-7
PLAN DETAILS	8-11
EROSION CONTROL	12-15
SIGNING PLAN	16-20
SIGNAL PLANS	21-28
PAVEMENT MARKING	29-30
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MISCELLANEOUS QUANTITIES	43-53
STANDARD DETAIL DRAWINGS	54-124
SIGN PLATES	125-154
CROSS SECTIONS	155-166

LAYOUT
SCALE 0 1 MI

****ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF
LAKE GENEVA LAND DEVELOPMENT STANDARDS, AND THE STANDARD
SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION;
LATEST ADDITIONS AND REVISIONS.**

COORDINATES ON THE PLAN ARE REFERENCED TO
THE WISCONSIN COUNTY COORDINATE SYSTEM, WALWORTH COUNTY

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED
TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88).



Toll Free (800) 242-8811
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

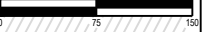
REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 150'



SEAL:

all in

SHEET:
PROJECT
OVERVIEW

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

3



7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

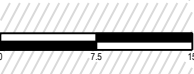
REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 15'



SEAL:

all in

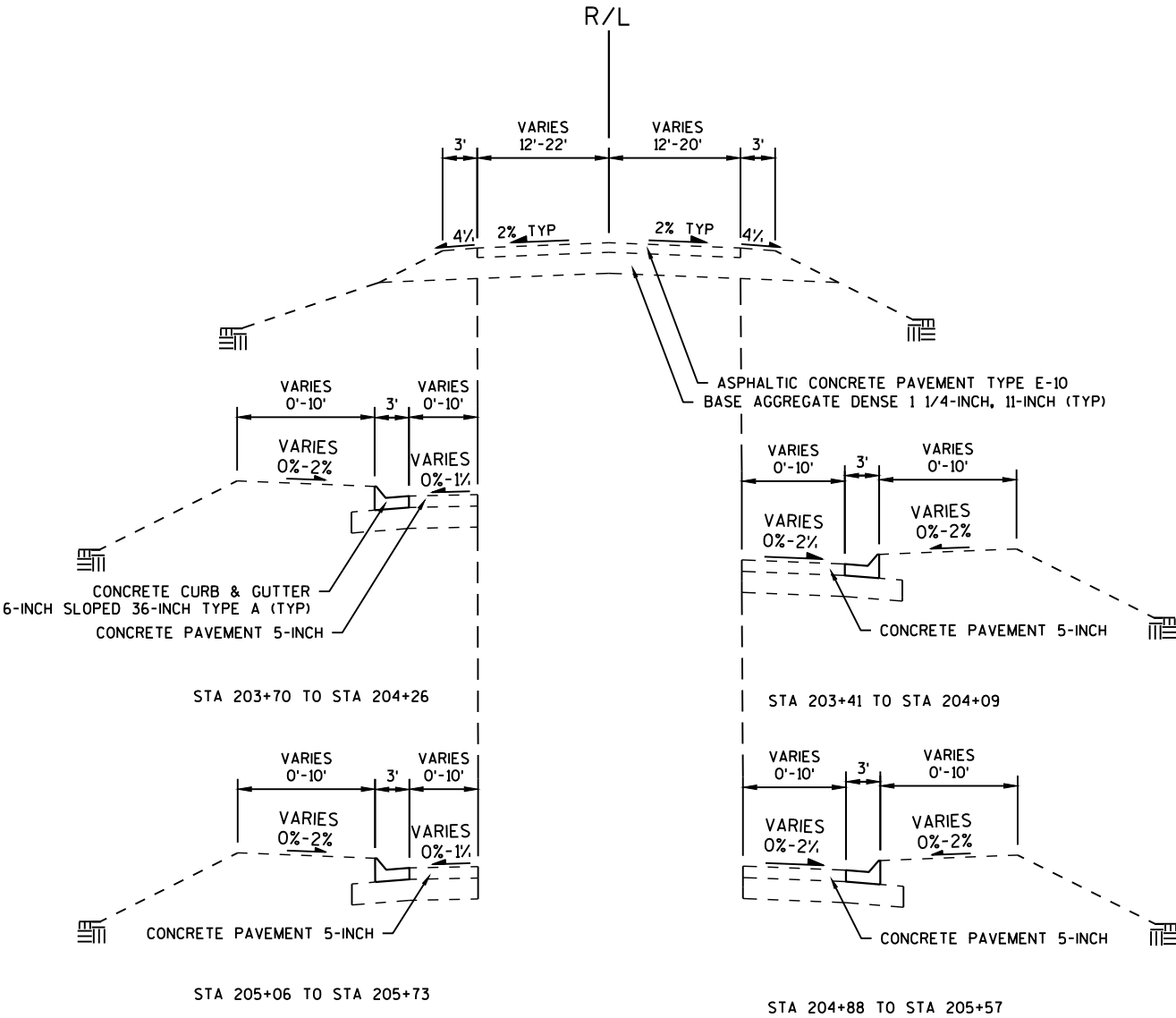
SHEET:

EXISTING TYPICAL
SECTIONS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

4



TYPICAL EXISTING SECTION

BLOOMFIELD ROAD

STA 200+43 TO STA 204+26

STA 204+88 TO STA 209+96

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

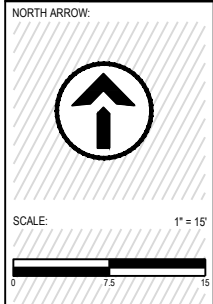
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



SEAL:

all in

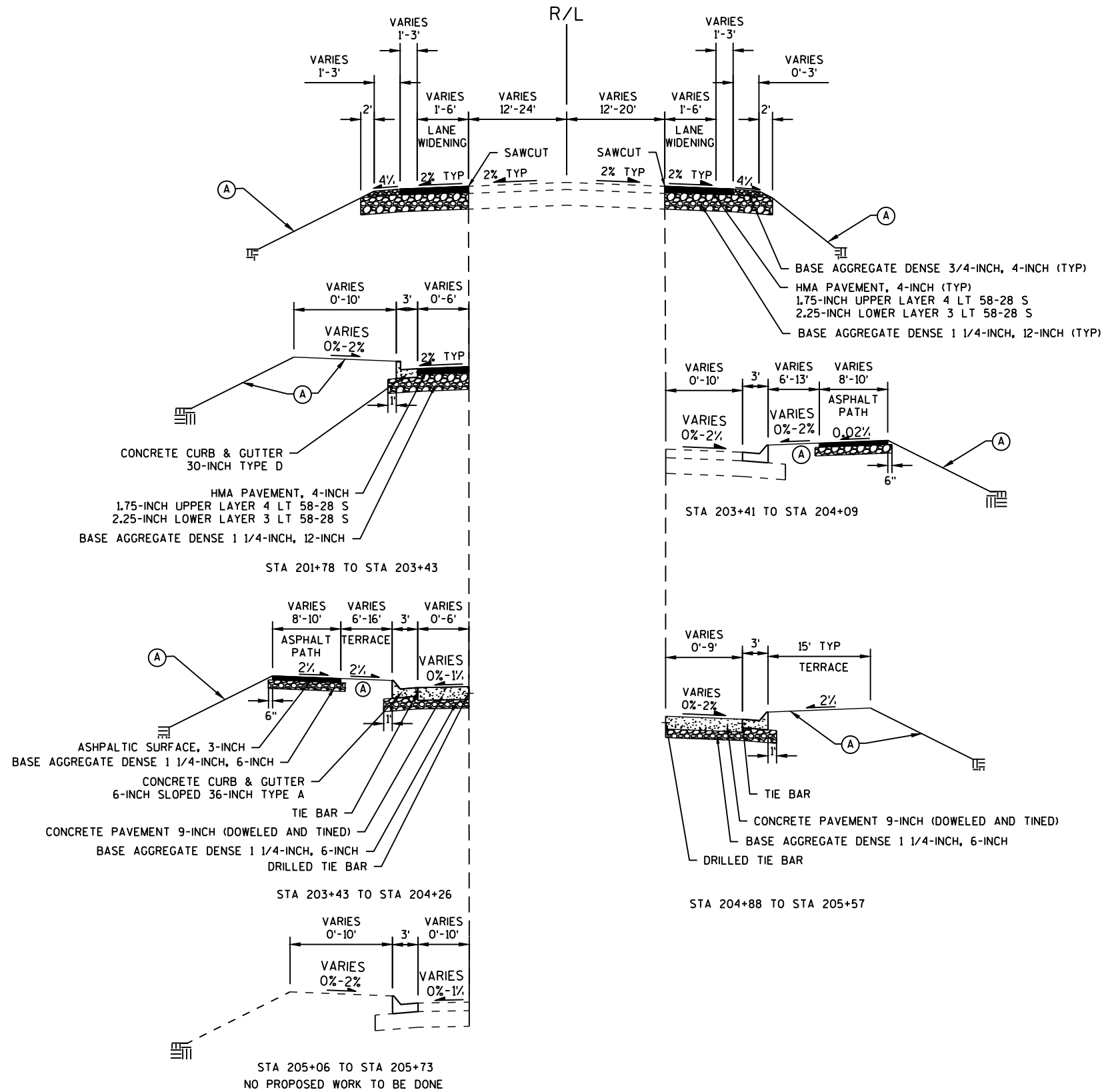
SHEET:

PROPOSED TYPICAL SECTIONS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

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Ⓐ RESTORATION AND EROSION MAT
PER "RESTORE DISTURBED AREAS" BID ITEM



7711 N. Port Washington Road
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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: X" = XX'

SEAL:

all in

SHEET:

CONSTRUCTION
DETAILS

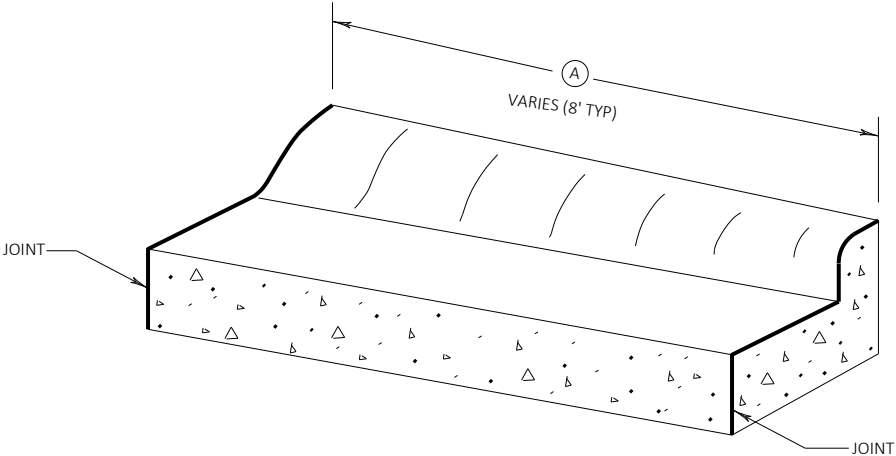
PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

6

NOTE

- (A) 30" CURB & GUTTER TYPE D TO CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A (TO BE MEASURED & PAID FOR AS CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A FOR VERTICAL FACE TO SLOPE FACE TRANSITIONS.



VERTICAL FACE TO ROLL FACE
BLOOMFIELD ROAD
STA 203+43.45 TO STA 203+51.43 LT



PROJECT:
ROOMFIELD ROAD
RTH 120
(TOWARDS BOULEVARD)
TRAFFIC SIGNAL PROJEC

TAKE GENEVA

ENT: _____



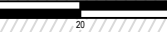
PLEASE:
D SET

VISIONS:	
DATE	DESCRIPTION

RIGHT ARROW:



SALE: $1^* = 1$



AL:

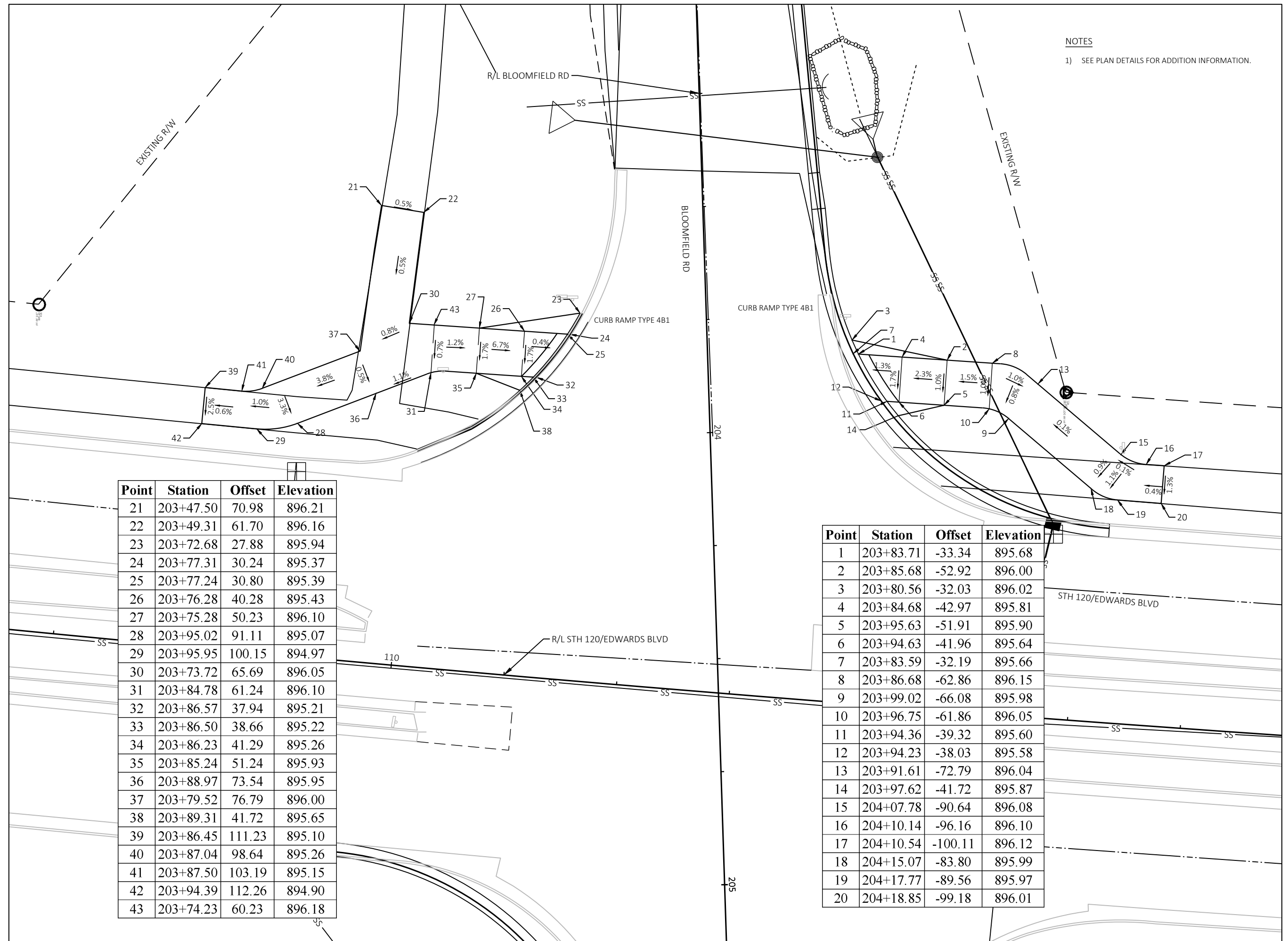
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CONSTRUCTION DETAILS - CURB RAMPS

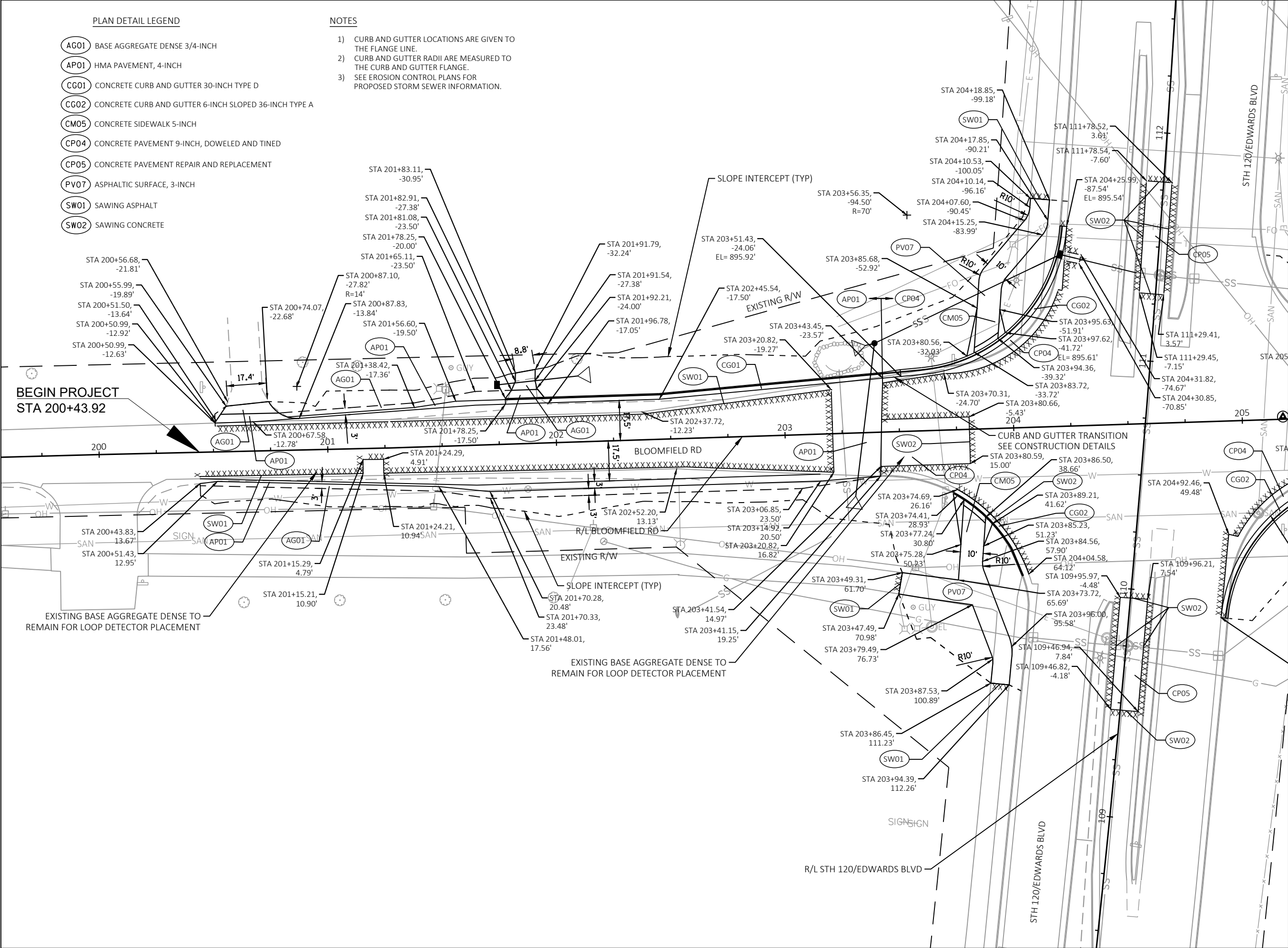
PROJECT MANAGER:	GL
PROJECT NUMBER:	21.0437
SIGNED BY:	NR
DRAWN BY:	WA
CHECKED BY:	A
DATE:	01/13/20

SHEET NUMBER: _____

7



FILENAME: D:\Walworth_Co\Lake Geneva_City\Gov\210437 Bloomfield and Edwards Signal\Design\210347\SheetsPlan\021010_cd.dwg



PLAN DETAIL LEGEND

- AG01 BASE AGGREGATE DENSE 3/4-INCH
- AP01 HMA PAVEMENT, 4-INCH
- CG01 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG02 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A
- CM05 CONCRETE SIDEWALK 5-INCH
- CP04 CONCRETE PAVEMENT 9-INCH, DOWELED AND TINED
- CP05 CONCRETE PAVEMENT REPAIR AND REPLACEMENT
- PV07 ASPHALTIC SURFACE, 3-INCH
- SW01 SAWING ASPHALT
- SW02 SAWING CONCRETE

NOTES

- 1) CURB AND GUTTER LOCATIONS ARE GIVEN TO THE FLANGE LINE.
- 2) CURB AND GUTTER RADII ARE MEASURED TO THE CURB AND GUTTER FLANGE.
- 3) SEE EROSION CONTROL PLANS FOR PROPOSED STORM SEWER INFORMATION.

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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

RELEASE:
BID SET

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1" = 40'

SEAL:

all in

SHEET:
PLAN DETAILS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

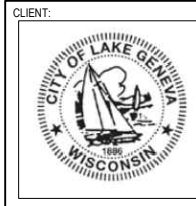
SHEET NUMBER:
8



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

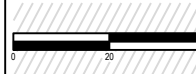
REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 40'



SEAL:

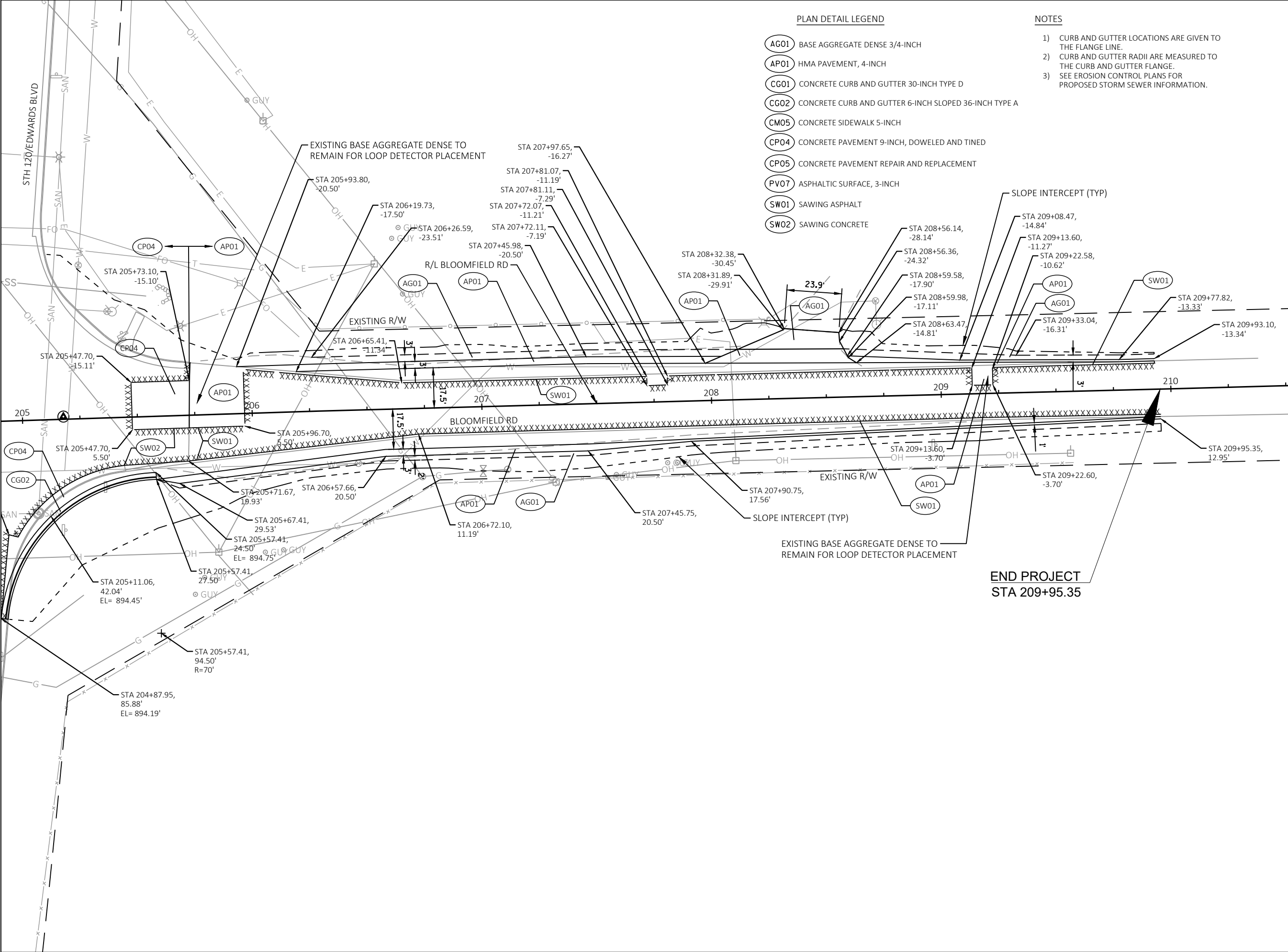
all in

SHEET:
PLAN DETAILS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

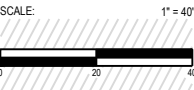
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



SEAL:

all in

SHEET:

PLAN DETAILS

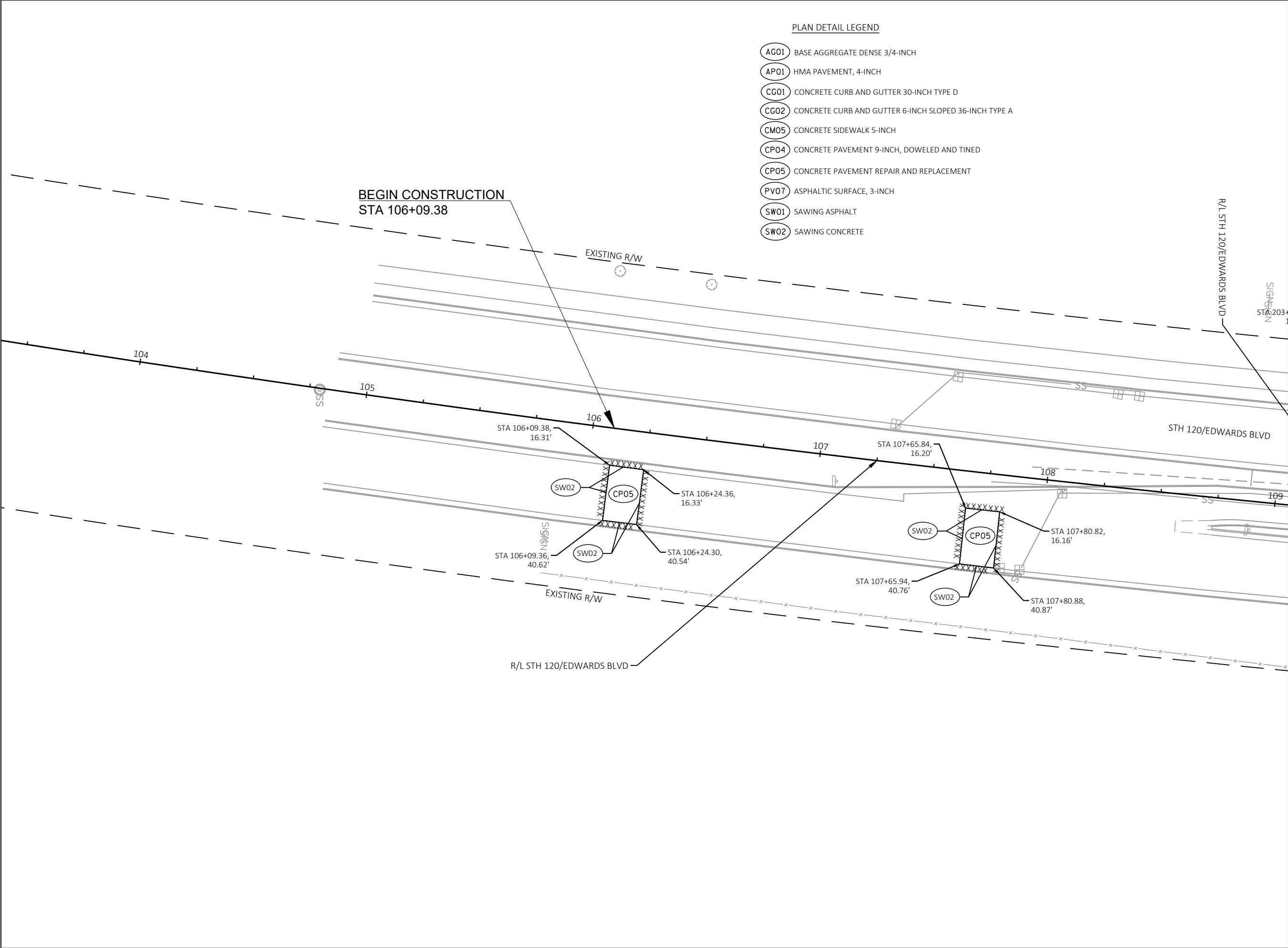
PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

10

PLAN DETAIL LEGEND

- AG01 BASE AGGREGATE DENSE 3/4-INCH
- AP01 HMA PAVEMENT, 4-INCH
- CG01 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG02 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A
- CM05 CONCRETE SIDEWALK 5-INCH
- CP04 CONCRETE PAVEMENT 9-INCH, DOWELED AND TINED
- CP05 CONCRETE PAVEMENT REPAIR AND REPLACEMENT
- PV07 ASPHALTIC SURFACE, 3-INCH
- SW01 SAWING ASPHALT
- SW02 SAWING CONCRETE





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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

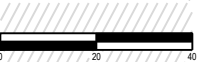
REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 40'



SEAL:

all in

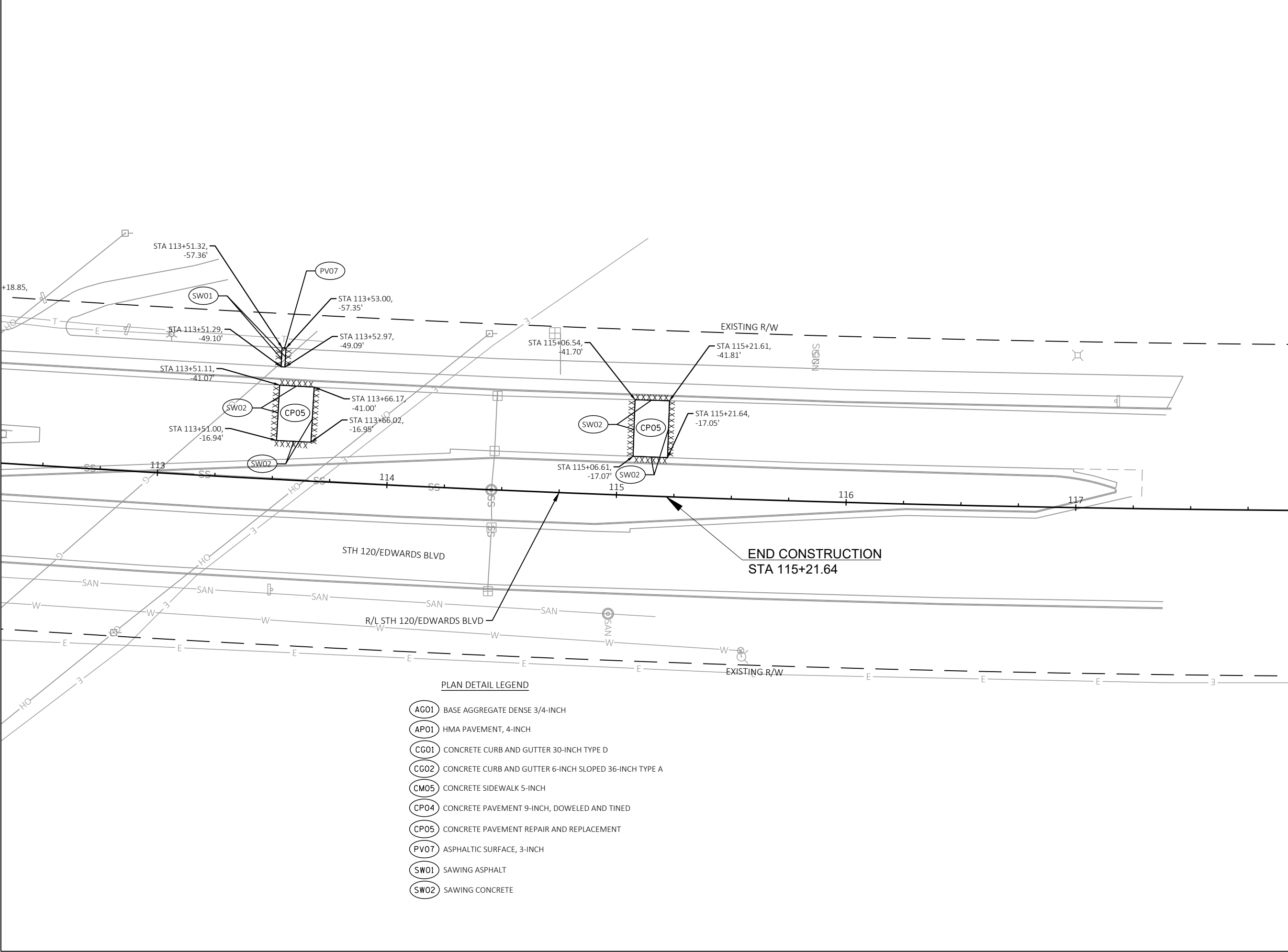
SHEET:

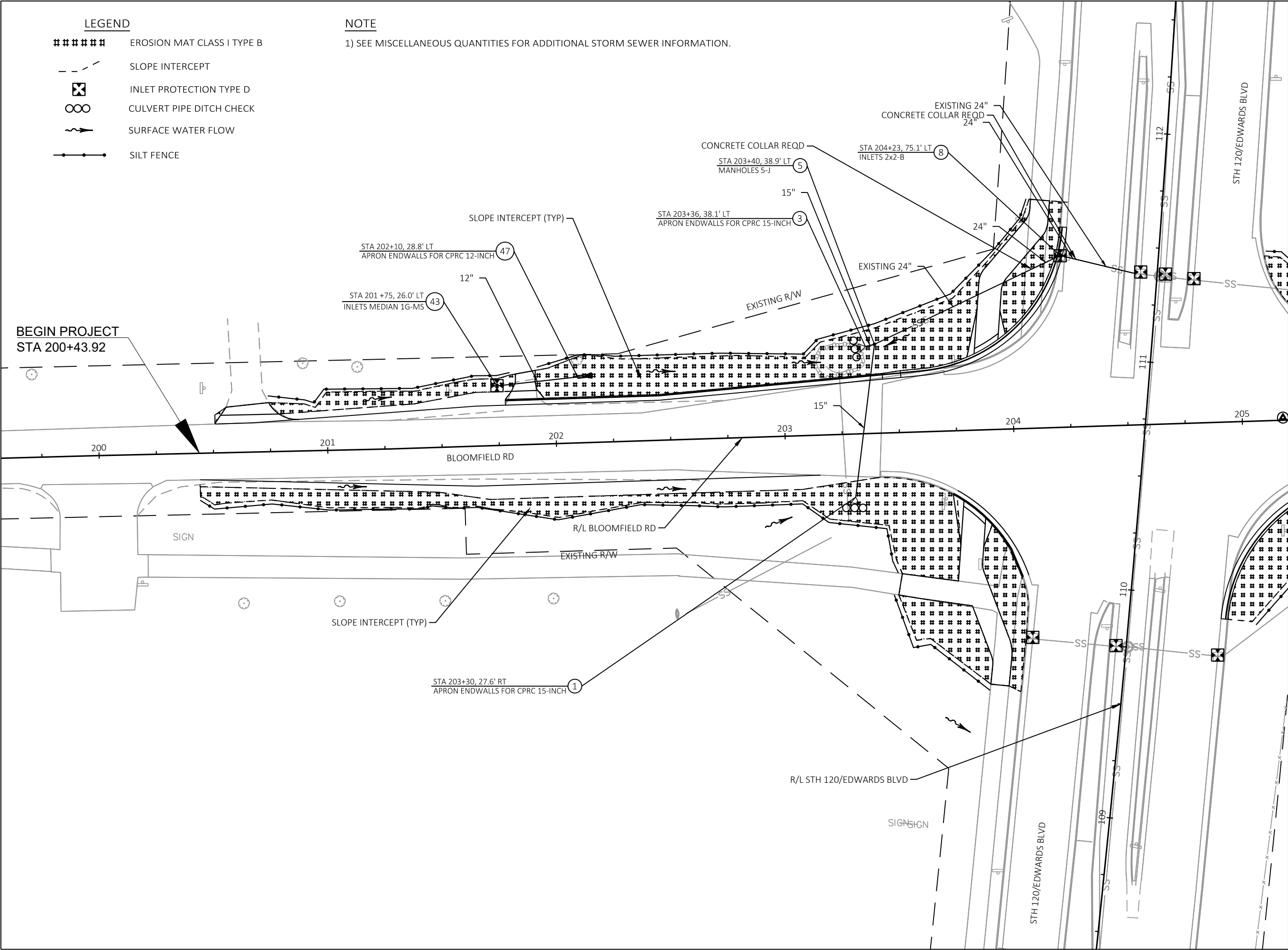
PLAN DETAILS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

11





LEGEND

- ##### EROSION MAT CLASS I TYPE B
- - - SLOPE INTERCEPT
- ⊗ INLET PROTECTION TYPE D
- ∞ CULVERT PIPE DITCH CHECK
- ~ SURFACE WATER FLOW
- SILT FENCE

NOTE

1) SEE MISCELLANEOUS QUANTITIES FOR ADDITIONAL STORM SEWER INFORMATION.



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

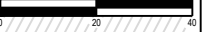
CLIENT:


RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:


SCALE: 1" = 40'


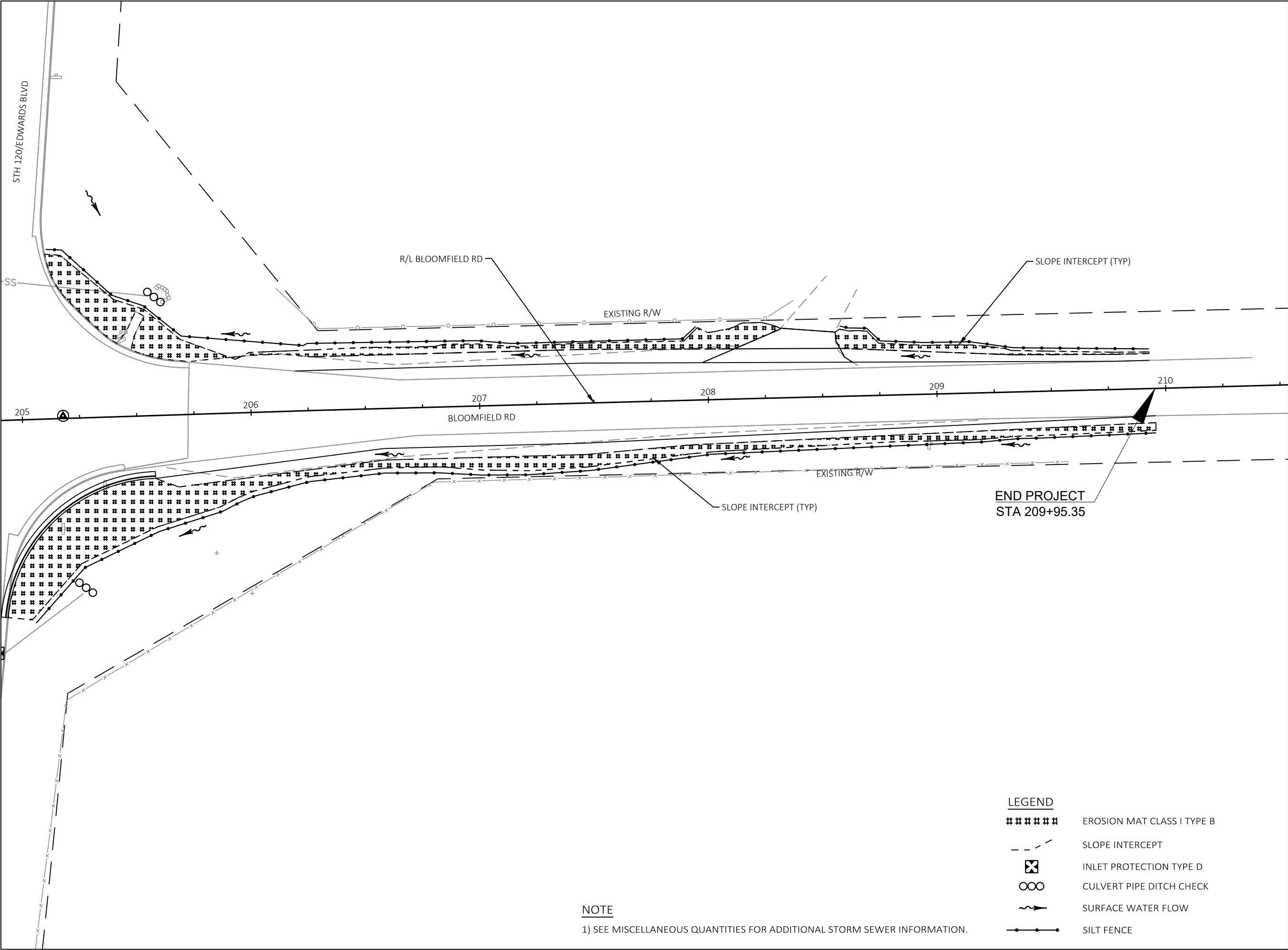
SEAL:


all in

SHEET:
EROSION CONTROL
PLAN

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
12



NOTE
1) SEE MISCELLANEOUS QUANTITIES FOR ADDITIONAL STORM SEWER INFORMATION.

- LEGEND**
EROSION MAT CLASS I TYPE B
- - - SLOPE INTERCEPT
⊠ INLET PROTECTION TYPE D
∞ CULVERT PIPE DITCH CHECK
~> SURFACE WATER FLOW
- - - SILT FENCE
- EROSION MAT CLASS I TYPE B
SLOPE INTERCEPT
INLET PROTECTION TYPE D
CULVERT PIPE DITCH CHECK
SURFACE WATER FLOW
SILT FENCE

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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1" = 40'

SEAL:

all in

SHEET:
EROSION CONTROL
PLAN

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

13



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

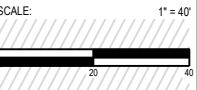
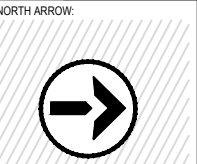
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



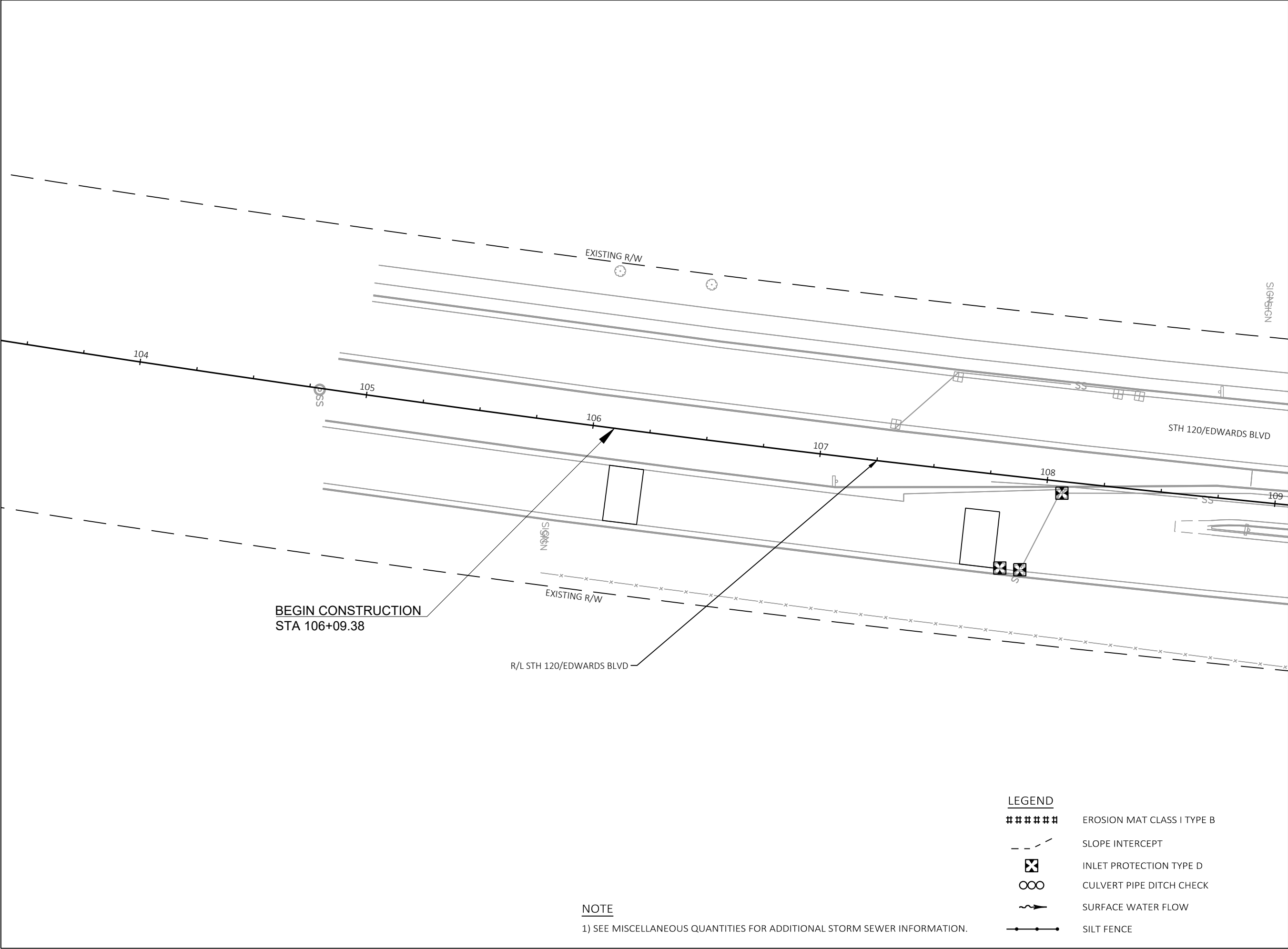
SEAL:

all in

SHEET:
EROSION CONTROL
PLAN

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
14



LEGEND

- ##### EROSION MAT CLASS I TYPE B
- - - - - SLOPE INTERCEPT
- ⊠ INLET PROTECTION TYPE D
- ∞ CULVERT PIPE DITCH CHECK
- ~> SURFACE WATER FLOW
- SILT FENCE

NOTE

1) SEE MISCELLANEOUS QUANTITIES FOR ADDITIONAL STORM SEWER INFORMATION.



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

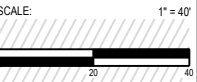
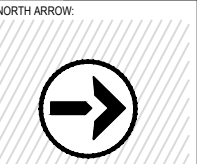
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



SEAL:

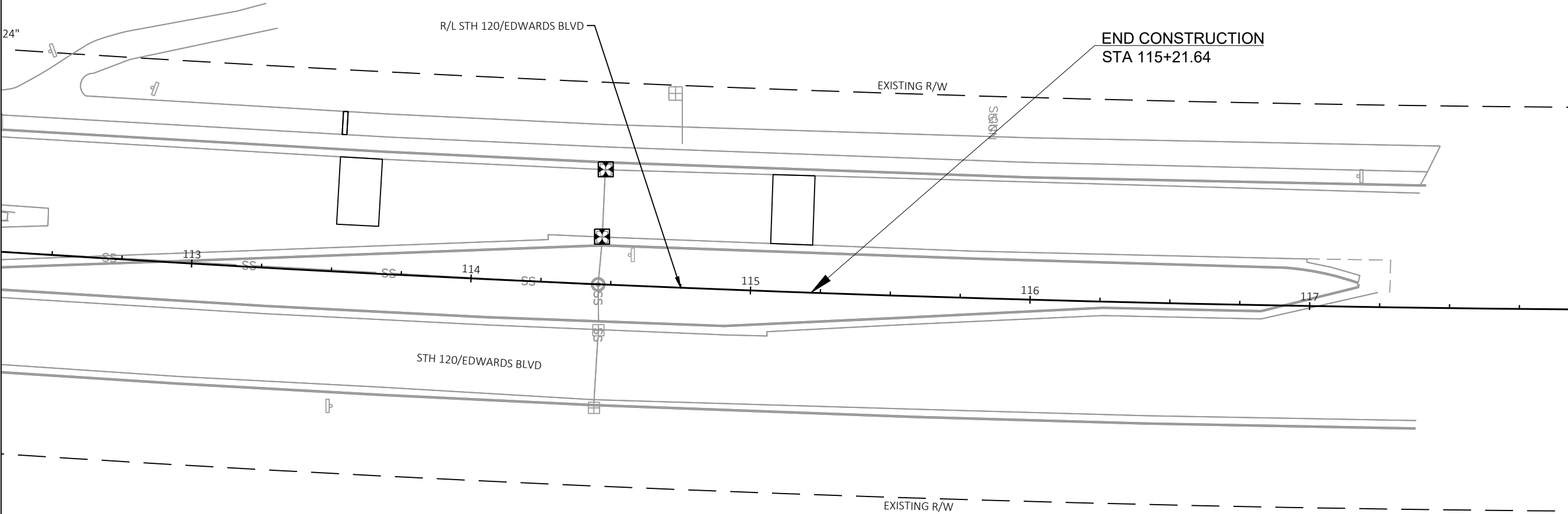
all in

SHEET:

EROSION CONTROL PLAN	
PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

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LEGEND

- ##### EROSION MAT CLASS I TYPE B
- - - - - SLOPE INTERCEPT
- ⊗ INLET PROTECTION TYPE D
- ∞ CULVERT PIPE DITCH CHECK
- ~> SURFACE WATER FLOW
- SILT FENCE

NOTE

1) SEE MISCELLANEOUS QUANTITIES FOR ADDITIONAL STORM SEWER INFORMATION.



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

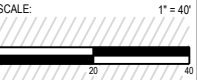
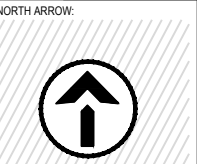
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



SEAL:

all in

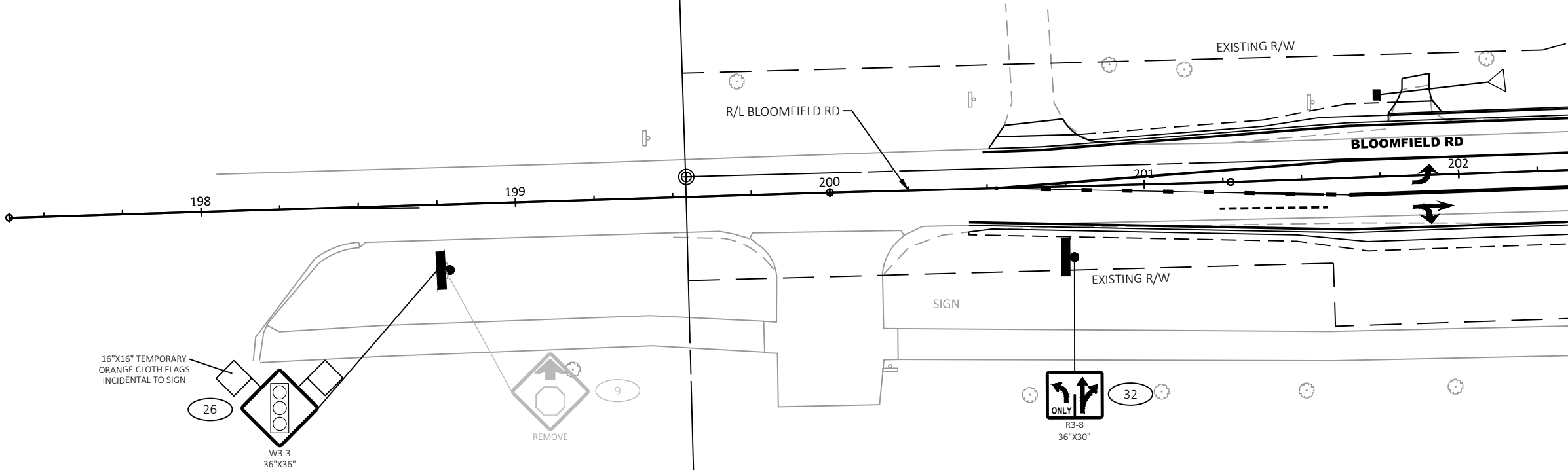
SHEET:

SIGNING PLAN

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

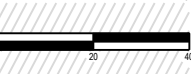
REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 40'



SEAL:

all in

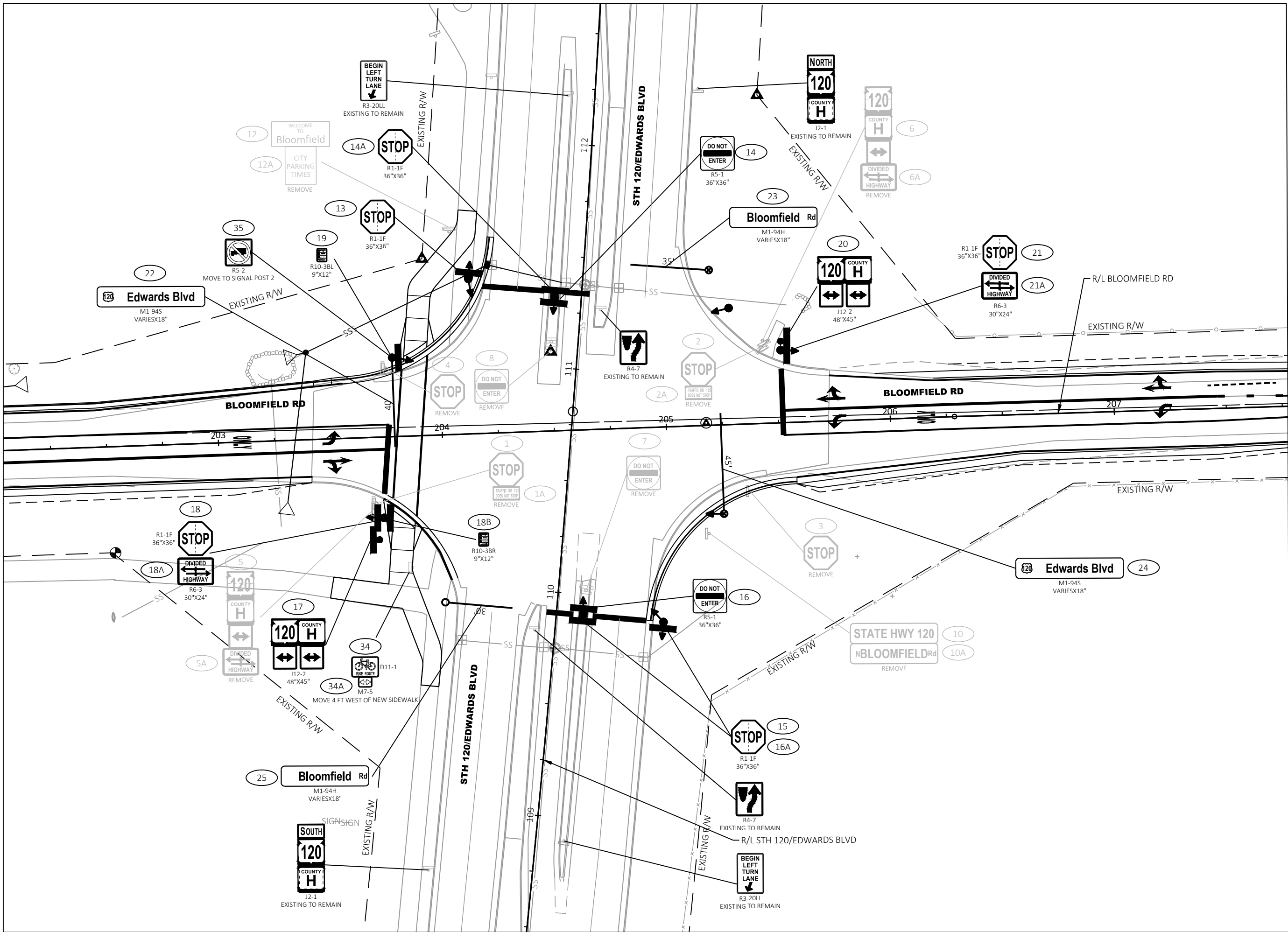
SHEET:

SIGNING PLAN

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:

17





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Milwaukee, Wisconsin 53217
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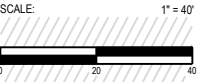
PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION



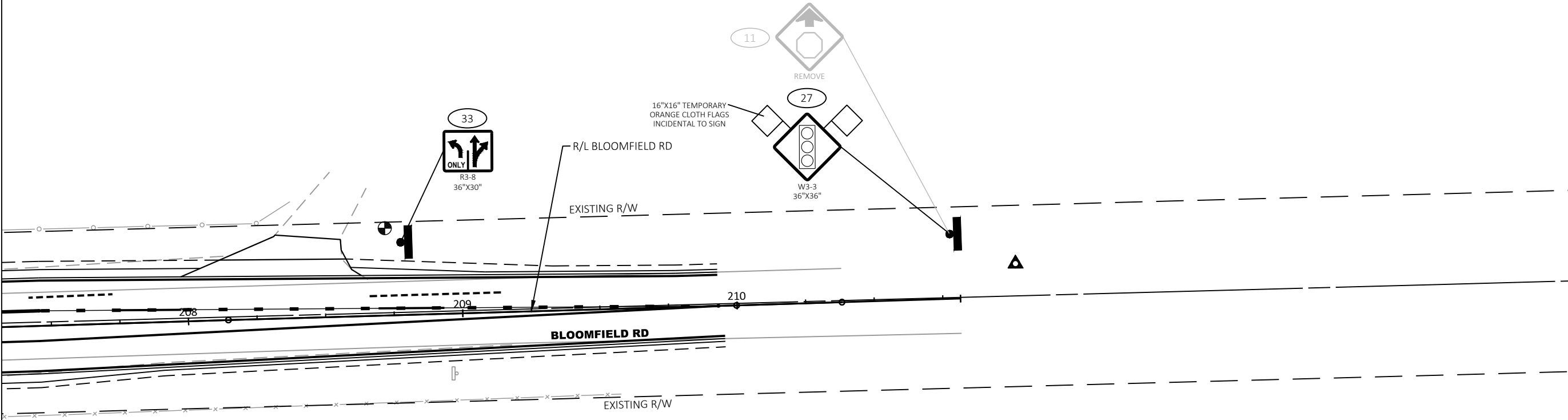
SEAL:

all in

SHEET:
SIGNING PLAN

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
18





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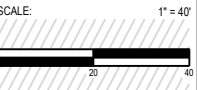
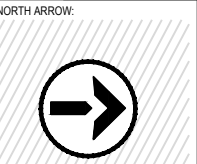
PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION



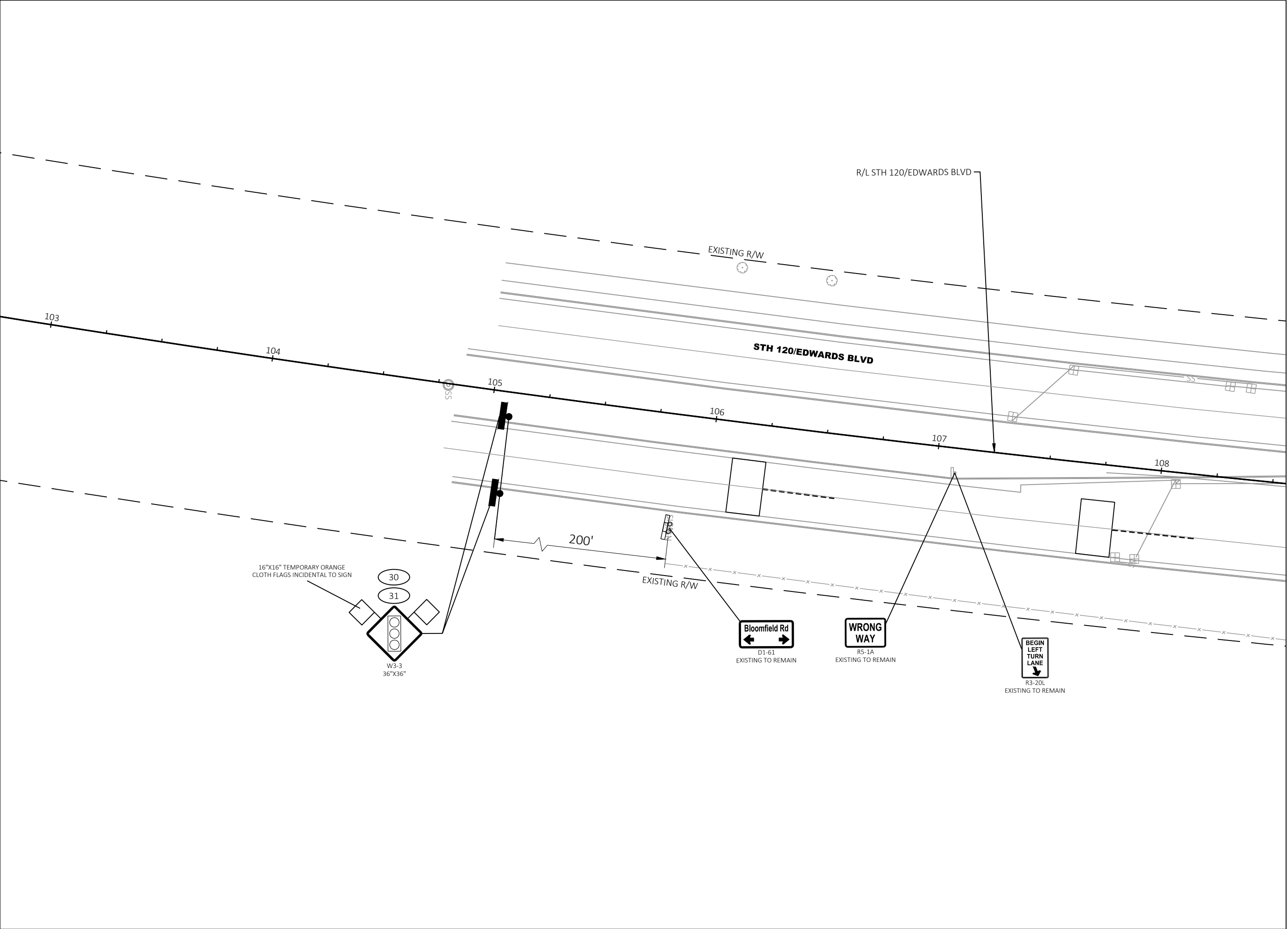
SEAL:

all in

SHEET:
SIGNING PLAN

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
19





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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

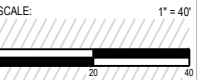
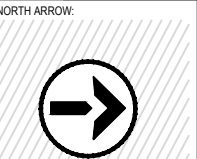
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



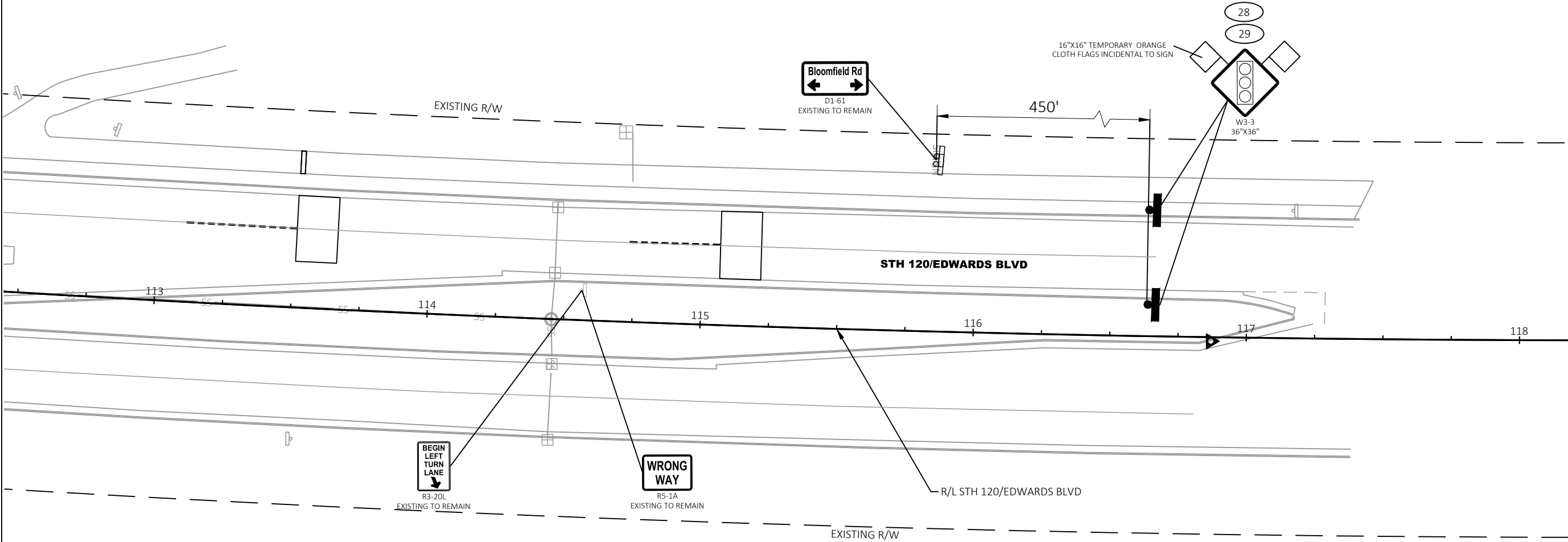
SEAL:

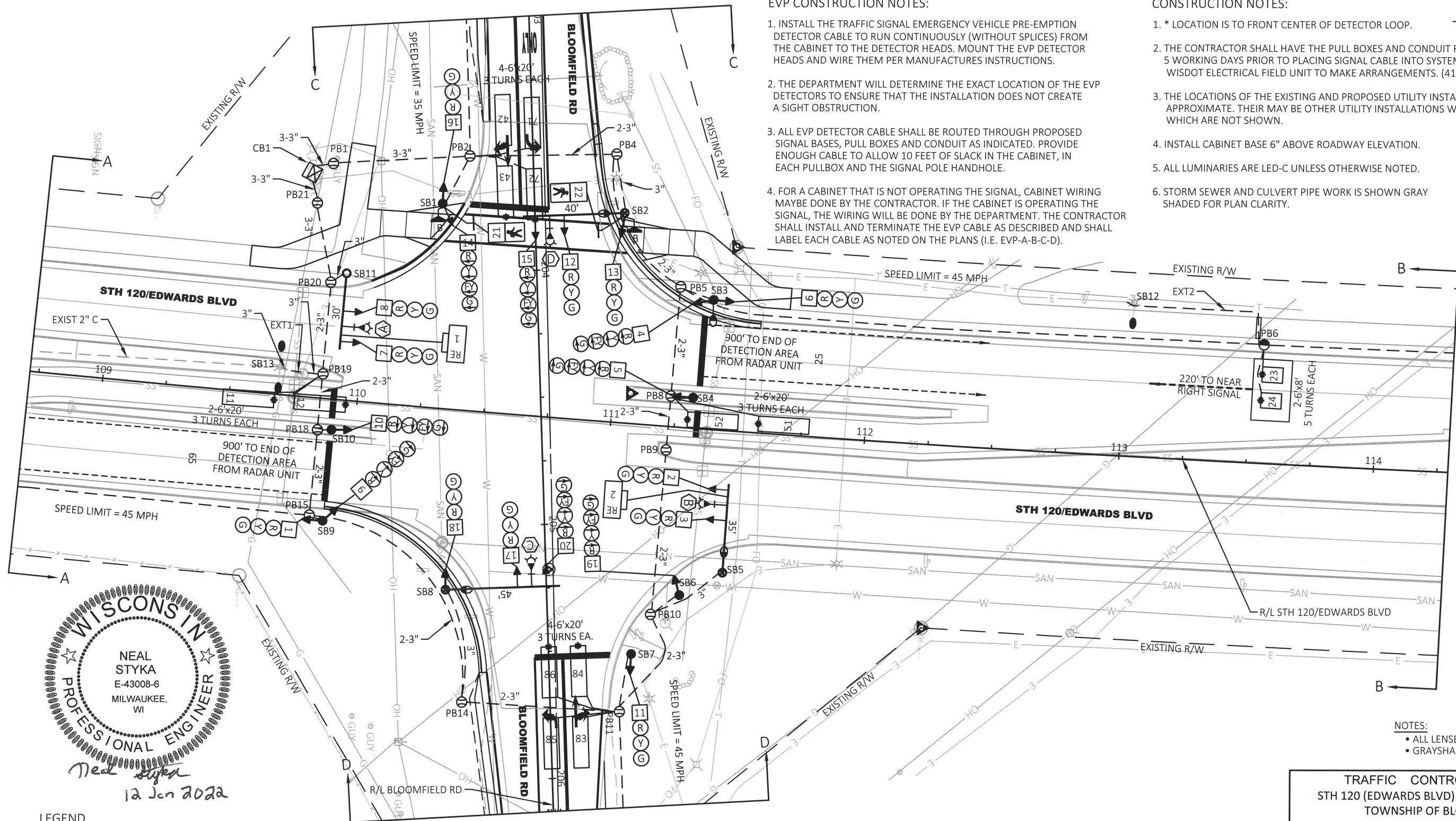
all in

SHEET:
SIGNING PLAN

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
20





LEGEND

	CONTROL CABINET
	NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
	LOOP DETECTOR CONDUIT 1" NONMETALLIC
	SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL OR TRANSFORMER BASE
	MONOTUBE - TYPE 10 BASE, POLE, 15'-30' ARM
	MONOTUBE - TYPE 10 SPECIAL BASE, POLE, 35'-45' ARM

	PEDESTRIAN HEAD
	CONFIRMATION LIGHT
	LOOP DETECTOR IN 1" NONMETALLIC CONDUIT
	RADAR DETECTION AREA
	PULL BOX, 24" X 42"

	ACCESSIBLE PEDESTRIAN PUSH BUTTON
	PULL BOX, 24" X 36"
	SIGNAL HEAD NUMBER
	RED CIRCULAR INDICATOR
	YELLOW CIRCULAR INDICATOR
	GREEN CIRCULAR INDICATOR
	RED ARROW
	YELLOW ARROW
	GREEN ARROW
	WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
	EVP DESIGNATOR
	EVP DETECTOR HEAD

	RADAR DETECTOR
	LUMINAIRE AND ARM
	LUMINAIRE ONLY
STRUCTURE NUMBERS	
SB2 = S-64-1116-1	
SB5 = S-64-1116-2	
SB8 = S-64-1116-3	
SB11 = S-64-1116-4	

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURES INSTRUCTIONS.
2. THE DEPARTMENT WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH PROPOSED SIGNAL BASES, PULL BOXES AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, IN EACH PULLBOX AND THE SIGNAL POLE HANDHOLE.
4. FOR A CABINET THAT IS NOT OPERATING THE SIGNAL, CABINET WIRING MAYBE DONE BY THE CONTRACTOR. IF THE CABINET IS OPERATING THE SIGNAL, THE WIRING WILL BE DONE BY THE DEPARTMENT. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE PLANS (I.E. EVP-A-B-C-D).

CONSTRUCTION NOTES:

1. * LOCATION IS TO FRONT CENTER OF DETECTOR LOOP.
2. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE WISDOT ELECTRICAL FIELD UNIT TO MAKE ARRANGEMENTS. (414) 266-1170.
3. THE LOCATIONS OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THEIR MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
4. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
5. ALL LUMINARIES ARE LED-C UNLESS OTHERWISE NOTED.
6. STORM SEWER AND CULVERT PIPE WORK IS SHOWN GRAY SHADED FOR PLAN CLARITY.

NOTES:

- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

TRAFFIC CONTROL SIGNAL
STH 120 (EDWARDS BLVD) & BLOOMFIELD RD
TOWNSHIP OF BLOOMFIELD
WALWORTH COUNTY

SIGNAL NO. **S64-1496** CABINET TYPE: TS2-E
CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED DATE **1/13/22** REGIONAL TRAFFIC ENGINEER

APPROVED DATE **1/13/22** STATE TRAFFIC ENGINEER

REGION CONTACT: D. WOLFORD DESIGNED BY: KAPUR REVISED BY:

PAGE 1 OF 4

PROJECT NO: 0663-22-103

HWY: STH 120

COUNTY: WALWORTH

TRAFFIC SIGNAL PLAN

SHEET 21

E

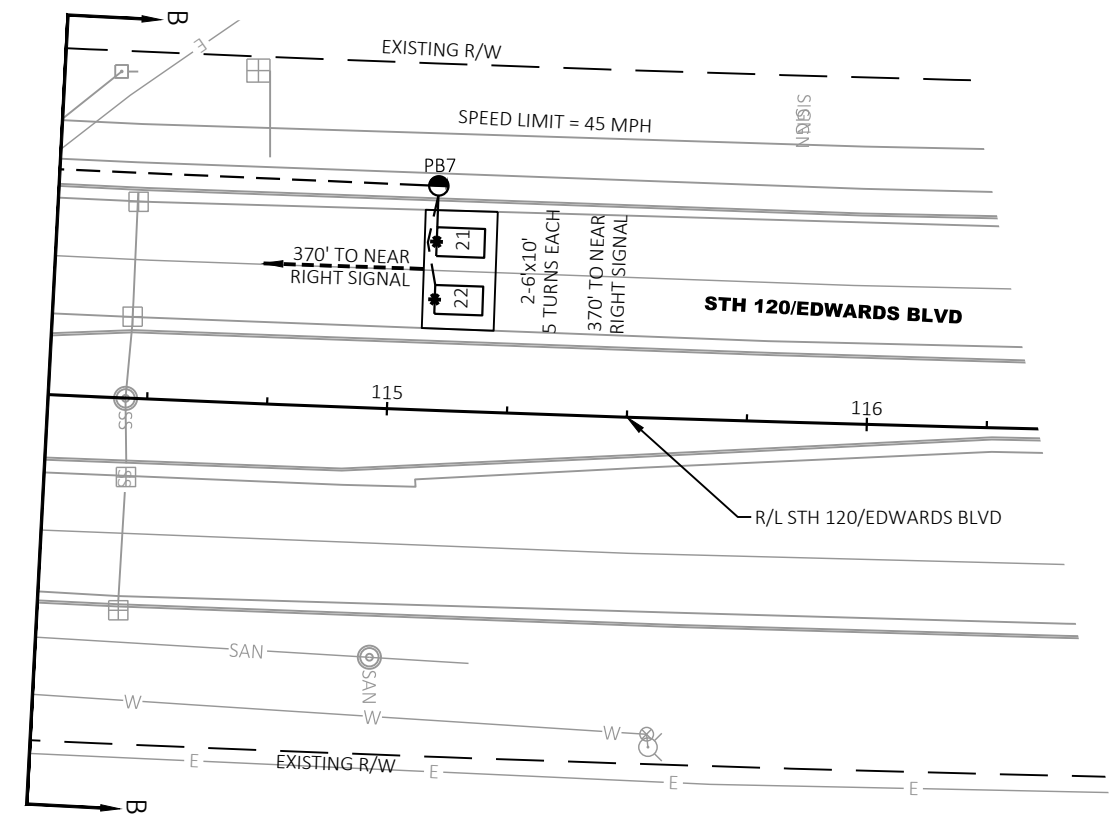
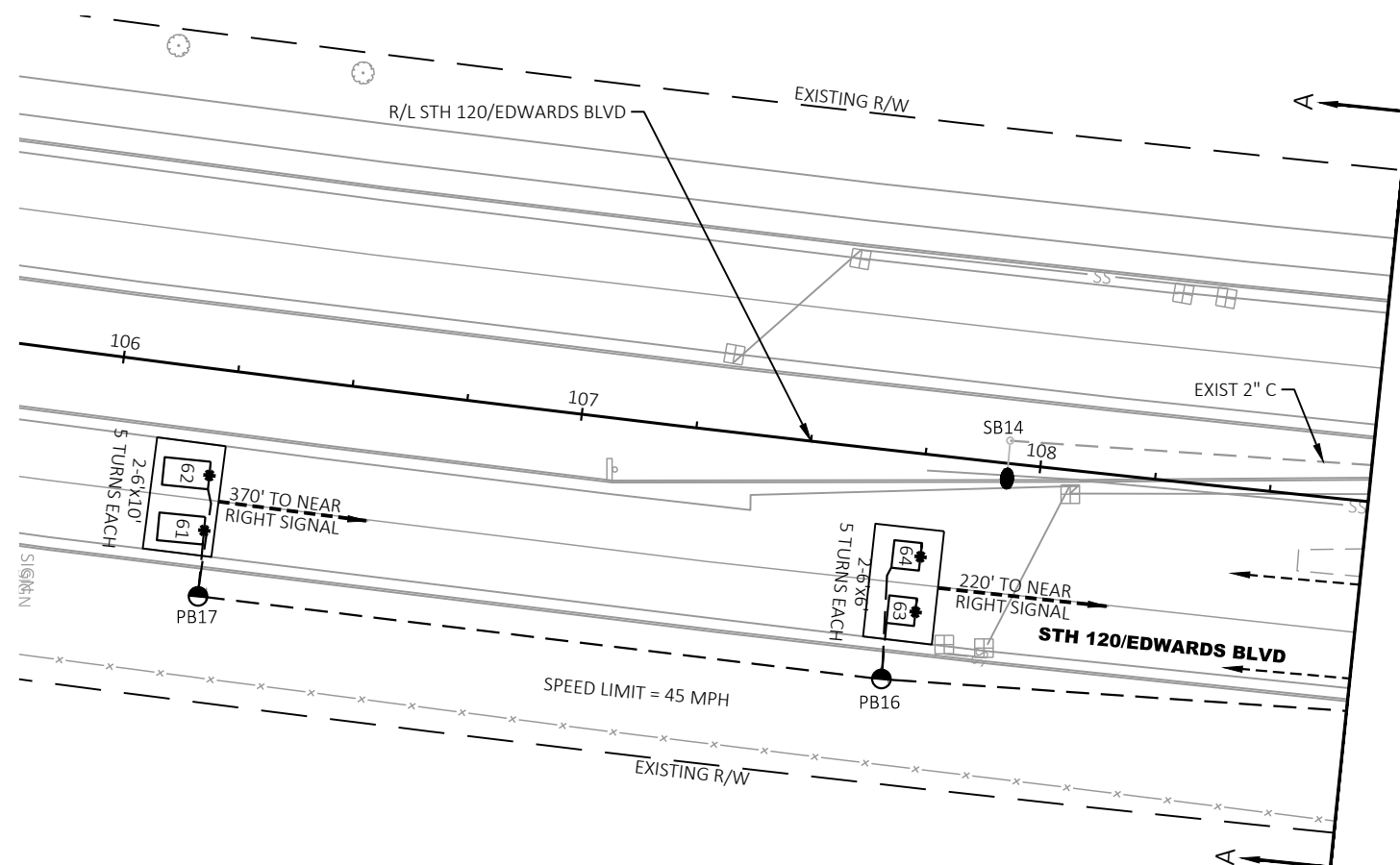
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LAYOUT NAME: SP-1

PLOT DATE: 1/12/2022 4:32 PM

PLOT BY: NEAL R. STYKA, P.E., PTOE, RSP

PLOT SCALE: 1 IN=40 FT

WISDOT/CADD'S SHEET 42



TRAFFIC CONTROL SIGNAL
STH 120 (EDWARDS BLVD) & BLOOMFIELD RD
TOWNSHIP OF BLOOMFIELD
WALWORTH COUNTY

SIGNAL NO. S64-1496

REGION CONTACT: D. WOLFORD
DESIGNED BY: KAPUR
REVISED BY:

PAGE 2 OF 4

PROJECT NO: 0663-22-103

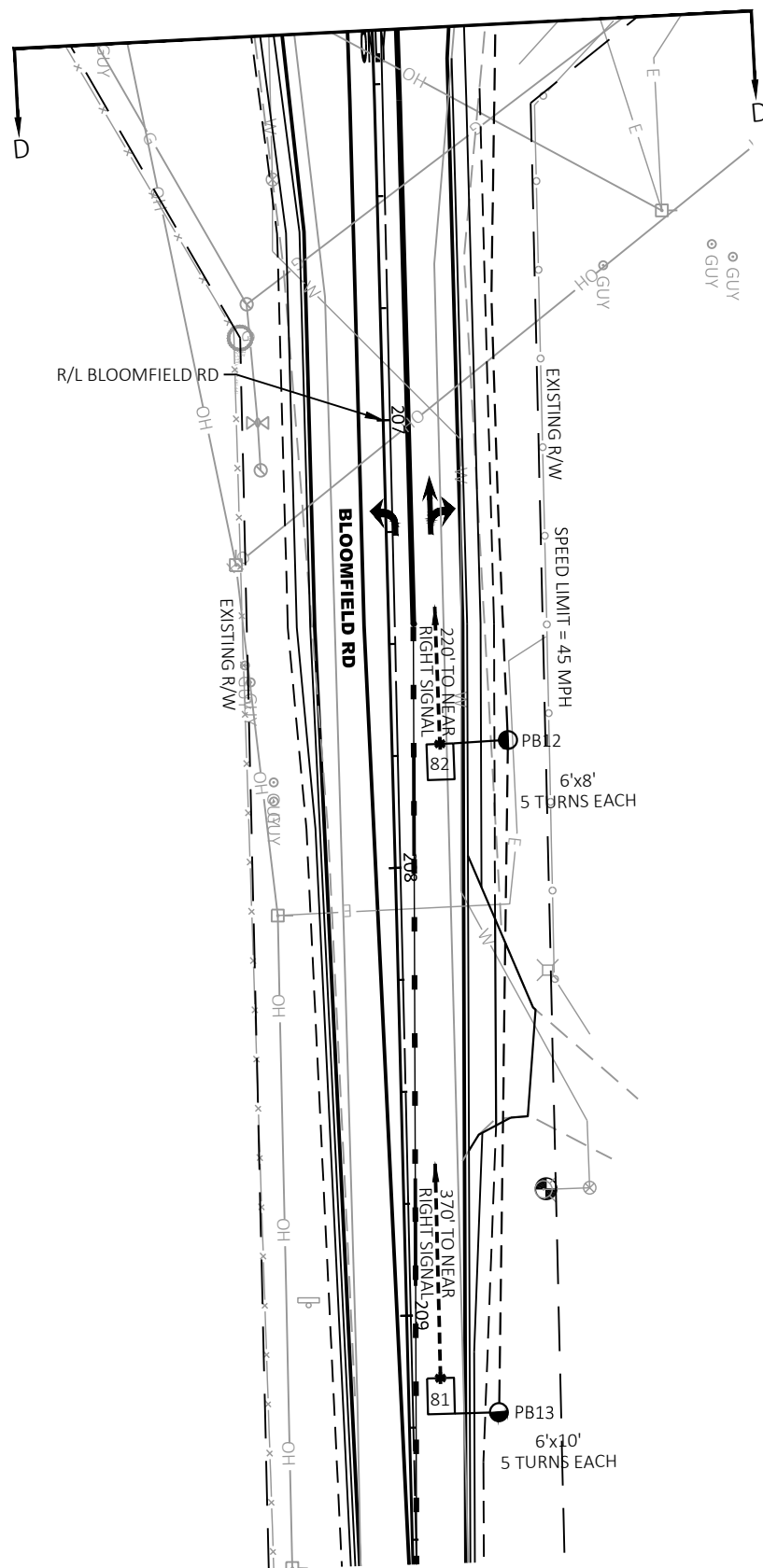
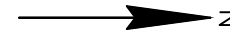
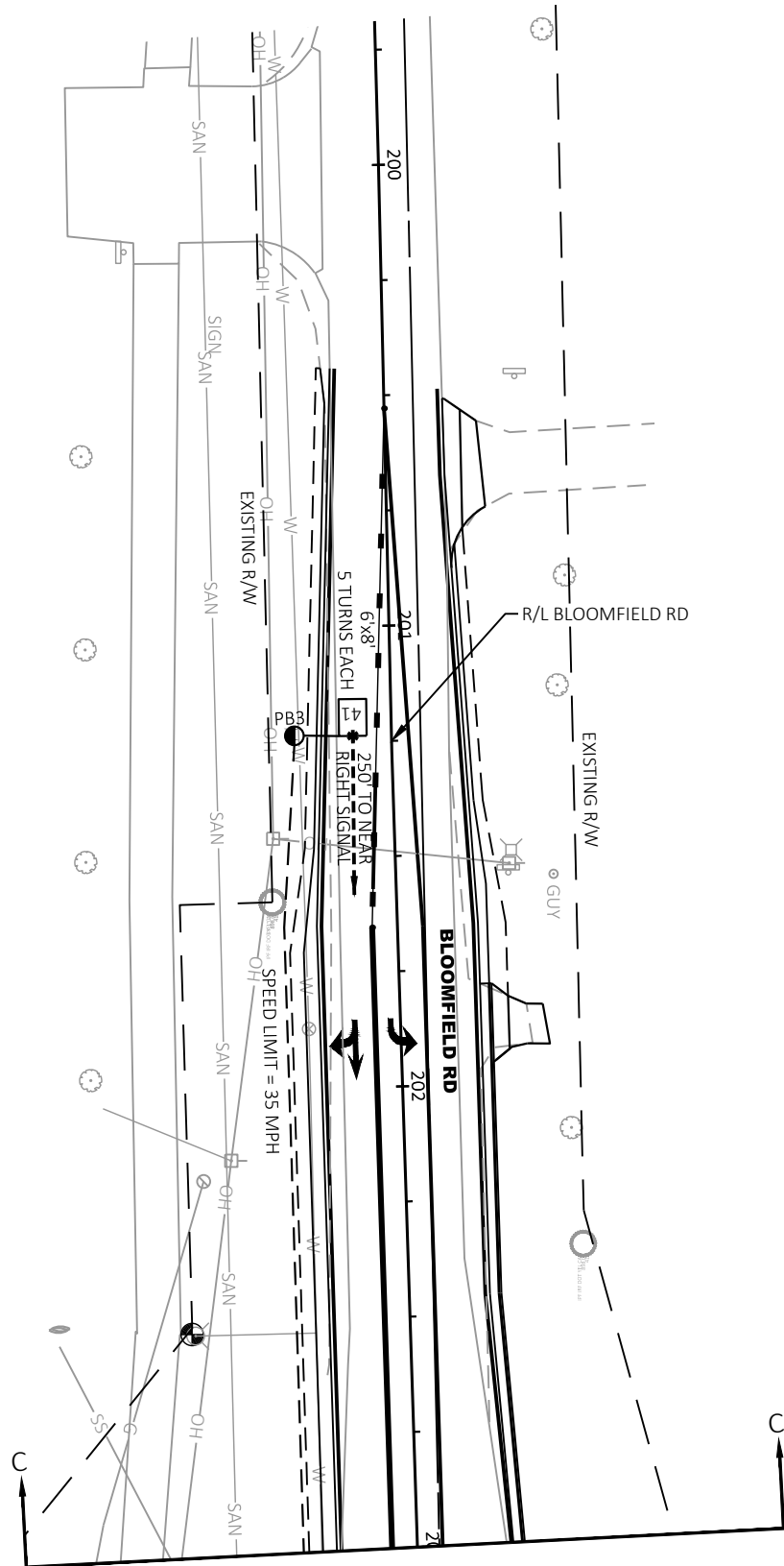
HWY: STH 120

COUNTY: WALWORTH

TRAFFIC SIGNAL PLAN

SHEET 22

E



TRAFFIC CONTROL SIGNAL STH 120 (EDWARDS BLVD) & BLOOMFIELD RD TOWNSHIP OF BLOOMFIELD WALWORTH COUNTY	
SIGNAL NO. S64-1496	
REGION CONTACT: D. WOLFORD DESIGNED BY: KAPUR REVISED BY:	PAGE 3 OF 4

PROJECT NO: 0663-22-103

HWY: STH 120

COUNTY: WALWORTH

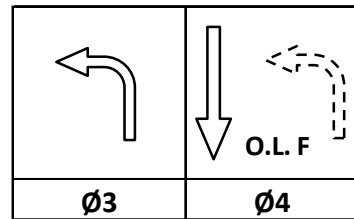
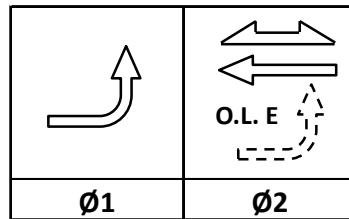
TRAFFIC SIGNAL PLAN

SHEET 23

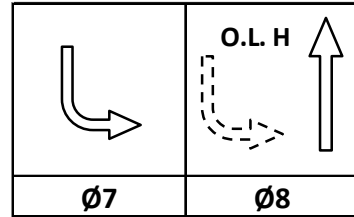
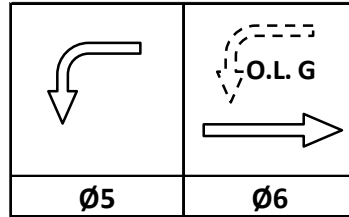
E

	HEAD NUMBERS	FLASH
Ø1	4,5	R
Ø2	6,7,8	R
Ø3	14,15	R
Ø4	16,17,18	R
Ø5	9,10	R
Ø6	1,2,3	R
Ø7	19,20	R
Ø8	11,12,13	R
Ø2P	21,22	
Ø4P		
Ø6P		
Ø8P		
OLE	4,5	-
OLF	14,15	-
OLG	9,10	-
OLH	19,20	-

RING 1



RING 2



BARRIER



DETECTOR LOGIC

DETECTOR INPUT	3	1	7	5	11	9	15	13
PLAN LOOP DETECTOR*(S)	11	21	23	41	43	52	62	64
CALLED PHASE	1	2	2	4	4	5	6	6
CALL OPTION	X	X	X		X	X	X	X
DELAY TIME					X			
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME				X				
USE ADDED INITIAL		X	X				X	X
CROSS SWITCH PHASE	2					6		

DETECTOR INPUT	4	2	8	6	12	10	16	14
PLAN LOOP DETECTOR*(S)	12	22	24	42	51	61	63	71
CALLED PHASE	1	2	2	4	5	6	6	7
CALL OPTION	X	X	X	X	X	X	X	X
DELAY TIME				X				
EXTENTION OPTION	X	X	X	X	X	X	X	X
EXTEND TIME								
USE ADDED INITIAL		X	X			X	X	
CROSS SWITCH PHASE	2				6			8

19	17	23	21	27	25	31	29
72	82	84	86				
7	8	8	8				
X		X	X				
X		X	X				
X	X	X	X				
	X						
8							

20	18	24	22	28	26	32	30
81	83	85					
8	8	8					
	X	X					
	X						
X	X	X					
X							

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN	X
3		8		X
4		8		X
5		2		X
6	X	2	MIN	X
7		4		X
8		4		X

GENERAL NOTES:

- PHASE 3 AND 5 TO BE OMITTED AT ALL TIMES EXCEPT DURING PRE-EMPTION

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	A	B	C	D
MOVEMENT				
PHASE	2+5	6+1	4+7	8+3

AFTER PREEMPTION SEQUENCE 2+5 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4+7 OR 8+3, CONTROLLER SHALL RETURN TO PHASES 4+8.

TYPE OF INTERCONNECT/COMMUNICATION	
NONE	
CLOSED LOOP	
TWISTED PAIR	
FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
CELL MODEM	X

TYPE OF COORDINATION	
NONE	X
TBC	
TRAFFIC RESPONSIVE	
ADAPTIVE	
*LOCATION OF MASTER	
CONTROLLER NO:	S-
SIGNAL SYSTEM NO:	SS-

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	X
HARDWIRE	
OTHER	
CONFIRMATION LIGHTS	X
LIFT BRIDGE	
QUEUE DETECTION	

35	33	39	37	43	41	47	45
25							
2							
X							
X							

36	34	40	38	44	42	48	46
65							
6							
X							
X							

DETECTOR INPUT	
PLAN LOOP DETECTOR*(S)	
CALLED PHASE	
CALL OPTION	
DELAY TIME	
EXTENTION OPTION	
EXTEND TIME	
USE ADDED INITIAL	
CROSS SWITCH PHASE	

DETECTOR INPUT	
PLAN LOOP DETECTOR*(S)	
CALLED PHASE	
CALL OPTION	
DELAY TIME	
EXTENTION OPTION	
EXTEND TIME	
USE ADDED INITIAL	
CROSS SWITCH PHASE	

STH 120 (EDWARDS BLVD) & BLOOMFIELD RD	
TOWNSHIP OF BLOOMFIELD	
WALWORTH COUNTY	
SIGNAL NO: S64-1496	CABINET TYPE: TS2-E
CONTROLLER TYPE: ECONOLITE	
DATE: 1/2022	PAGE NUMBER: 4 OF 4

PROJECT ID:	0663-22-103
INTERSECTION:	STH 120 (EDWARDS BOULEVARD) AND BLOOMFIELD ROAD

SIGNAL WIRE COLOR CODING	BLK-BLACK	RED-RED	GRN-GREEN
	WHT-WHITE	BLU-BLUE	ORG-ORANGE

CB1 TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	FLASHING <YELLOW>	D/WALK	WALK	PED NEUTRAL	OTHER
SB1	12	14				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		16	RED	ORANGE	GREEN								
		21								BLU	BLK		
SB2	12	B										WHT/BLK	BLU/BLK
		12	RED	ORANGE	GREEN								
		13	RED	ORANGE	GREEN								
		15				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
		22								BLU	BLK		
SB3	12	B										WHT/BLK	BLU/BLK
		4				RED	ORG	GRN	BLK/WHT				
		6	RED/BLK	ORG/BLK	GREEN/BLK								
SB4	7	5				RED	ORG	GRN	BLK				
SB5	7	2	RED	ORANGE	GREEN								
		3	RED	ORANGE	GREEN								
SB6	7	19				RED	ORG	GRN	BLK				
SB7	7	11	RED	ORANGE	GREEN								
SB8	12	17	RED	ORANGE	GREEN								
		18	RED	ORANGE	GREEN								
		20				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB9	12	1	RED	ORANGE	GREEN								
		9				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT				
SB10	7	10				RED	ORG	GRN	BLK				
SB11	12	7	RED	ORANGE	GREEN								
		8	RED	ORANGE	GREEN								

- NOTES:
- 1. USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
 - 2. ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
 - 3. AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART.
CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB1
PB4	SB2
PB5	SB3
PB8	SB4
PB9	SB4
PB10	SB5
PB11	SB7
PB14	SB8
PB15	SB9
PB18	SB10
PB19	SB10
PB20	SB11
PB21	CB1

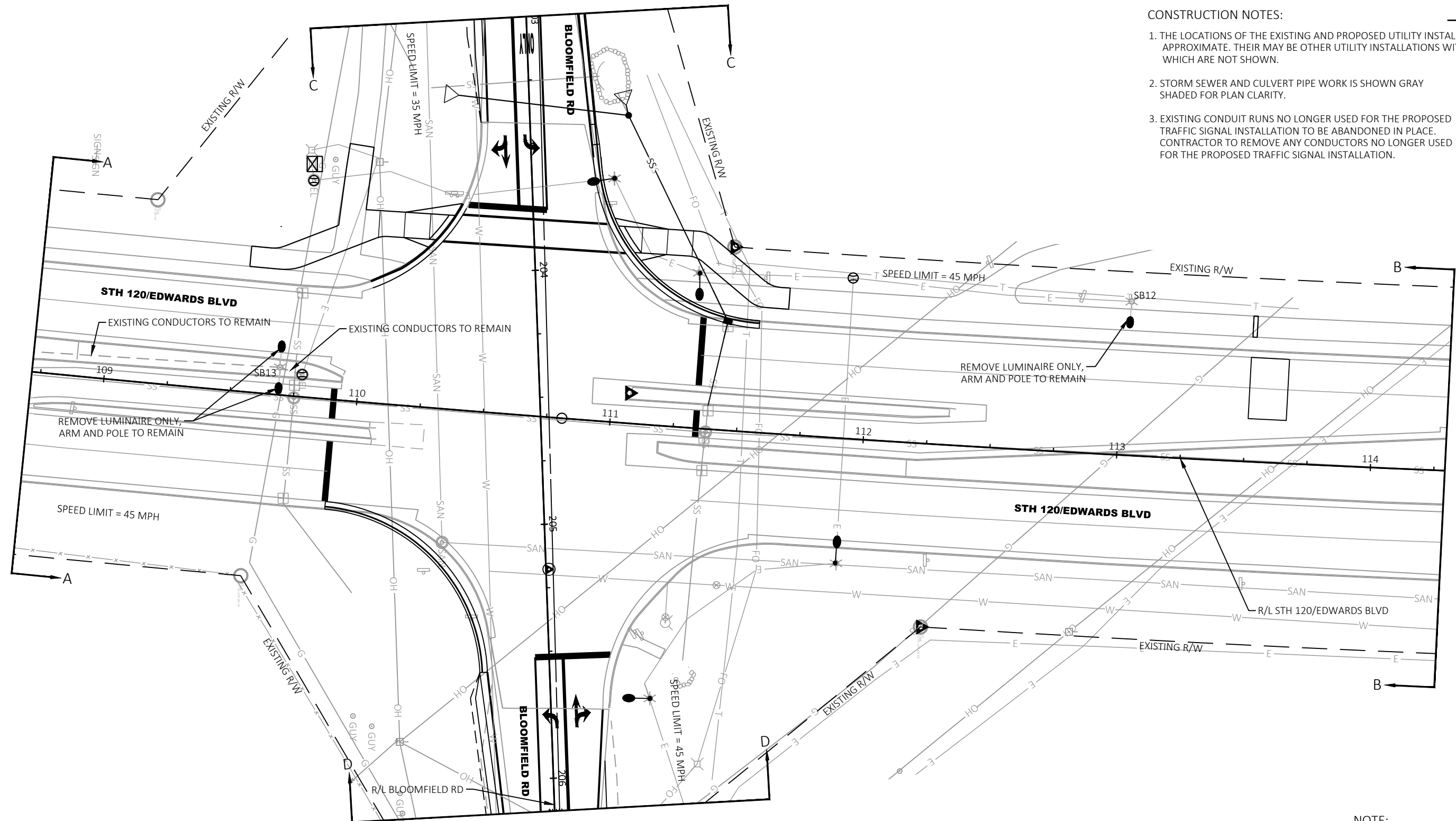
EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB11 (HEAD A)
CB1	SB5 (HEAD B)
CB1	SB8 (HEAD C)
CB1	SB1 (HEAD D)

CONFIRMATION BEACON CABLE TRAFFIC SIGNAL 3-14 AWG	
FROM	TO
CB1	SB11 (HEAD A)
CB1	SB5 (HEAD B)
CB1	SB8 (HEAD C)
CB1	SB1 (HEAD D)

RADAR DETECTION CABLE	
FROM	TO
CB1	SB11 (RE1)
CB1	SB5 (RE2)

CONSTRUCTION NOTES:

1. THE LOCATIONS OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THEIR MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
2. STORM SEWER AND CULVERT PIPE WORK IS SHOWN GRAY SHADED FOR PLAN CLARITY.
3. EXISTING CONDUIT RUNS NO LONGER USED FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION TO BE ABANDONED IN PLACE. CONTRACTOR TO REMOVE ANY CONDUCTORS NO LONGER USED FOR THE PROPOSED TRAFFIC SIGNAL INSTALLATION.



LEGEND

- CONTROL CABINET
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- PULL BOX, 24" X 42"
- LUMINAIRE AND ARM
- LUMINAIRE ONLY

NOTE:
GRAYSHADE REPRESENTS EXISTING TO REMAIN.
BOLD REPRESENTS EXISTING TO BE REMOVED.

TRAFFIC CONTROL SIGNAL
STH 120 (EDWARDS BLVD) & BLOOMFIELD RD
TOWNSHIP OF BLOOMFIELD
WALWORTH COUNTY

SIGNAL NO. **S64-1496**

REGION CONTACT: D. WOLFORD
DESIGNED BY: KAPUR
REVISED BY:

PAGE 1 OF 2

PROJECT NO: 0663-22-103

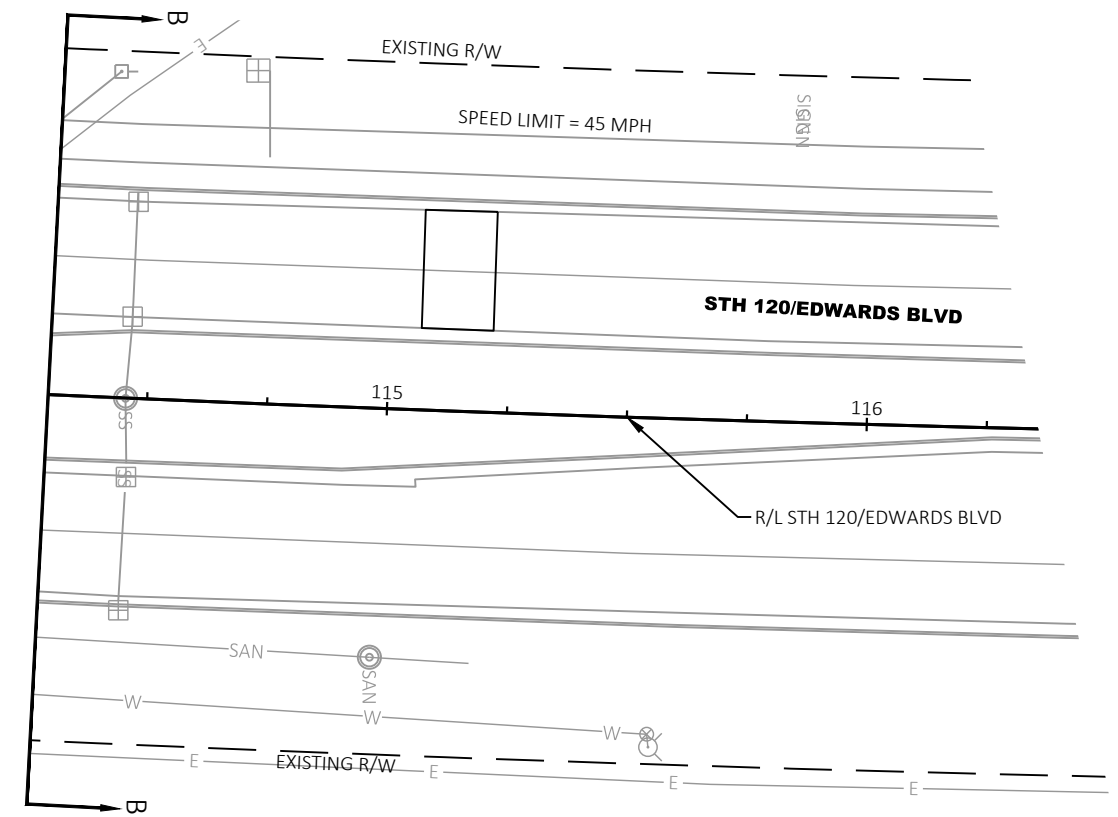
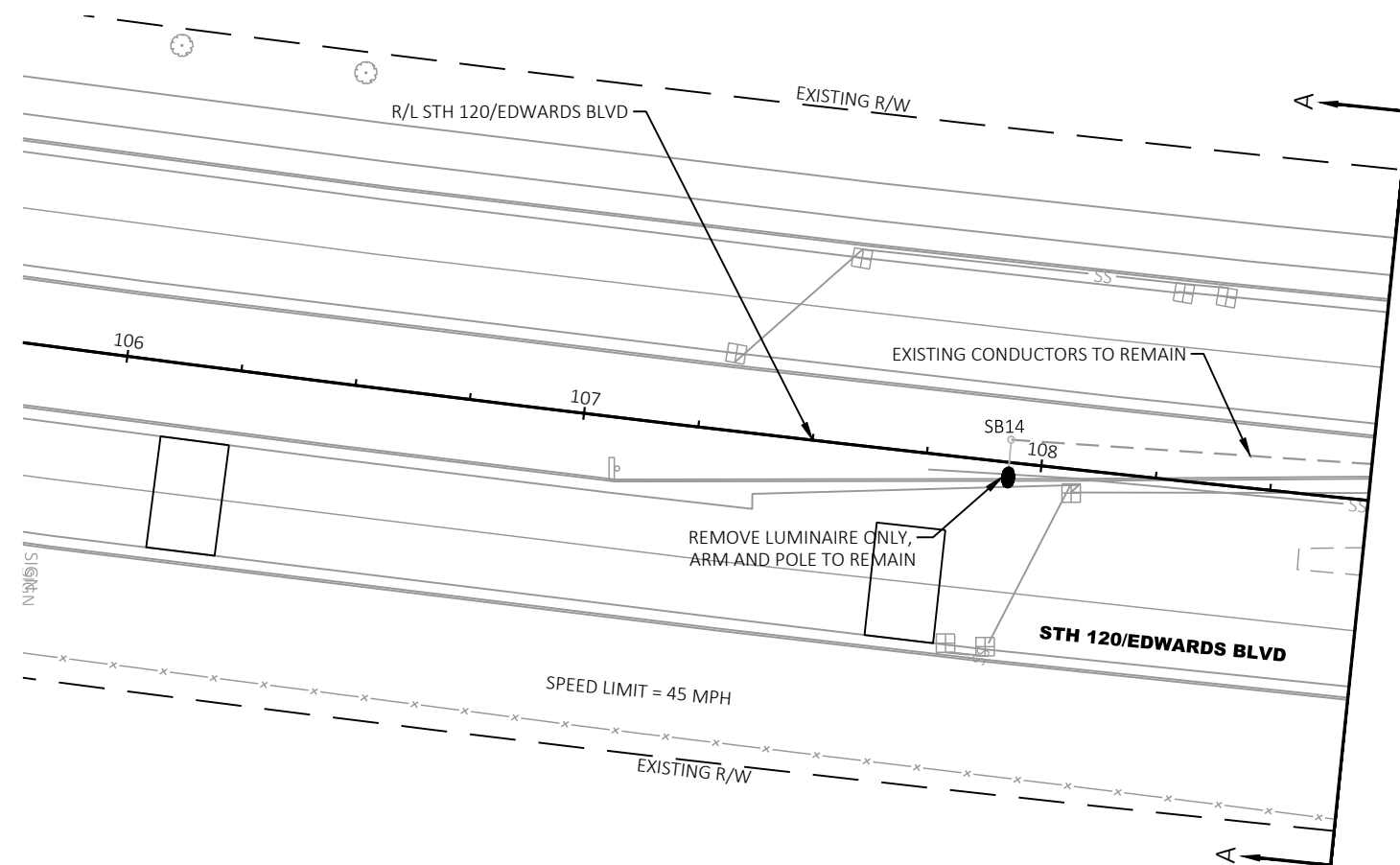
HWY: STH 120

COUNTY: WALWORTH

TRAFFIC SIGNAL REMOVAL PLAN

SHEET 27

E

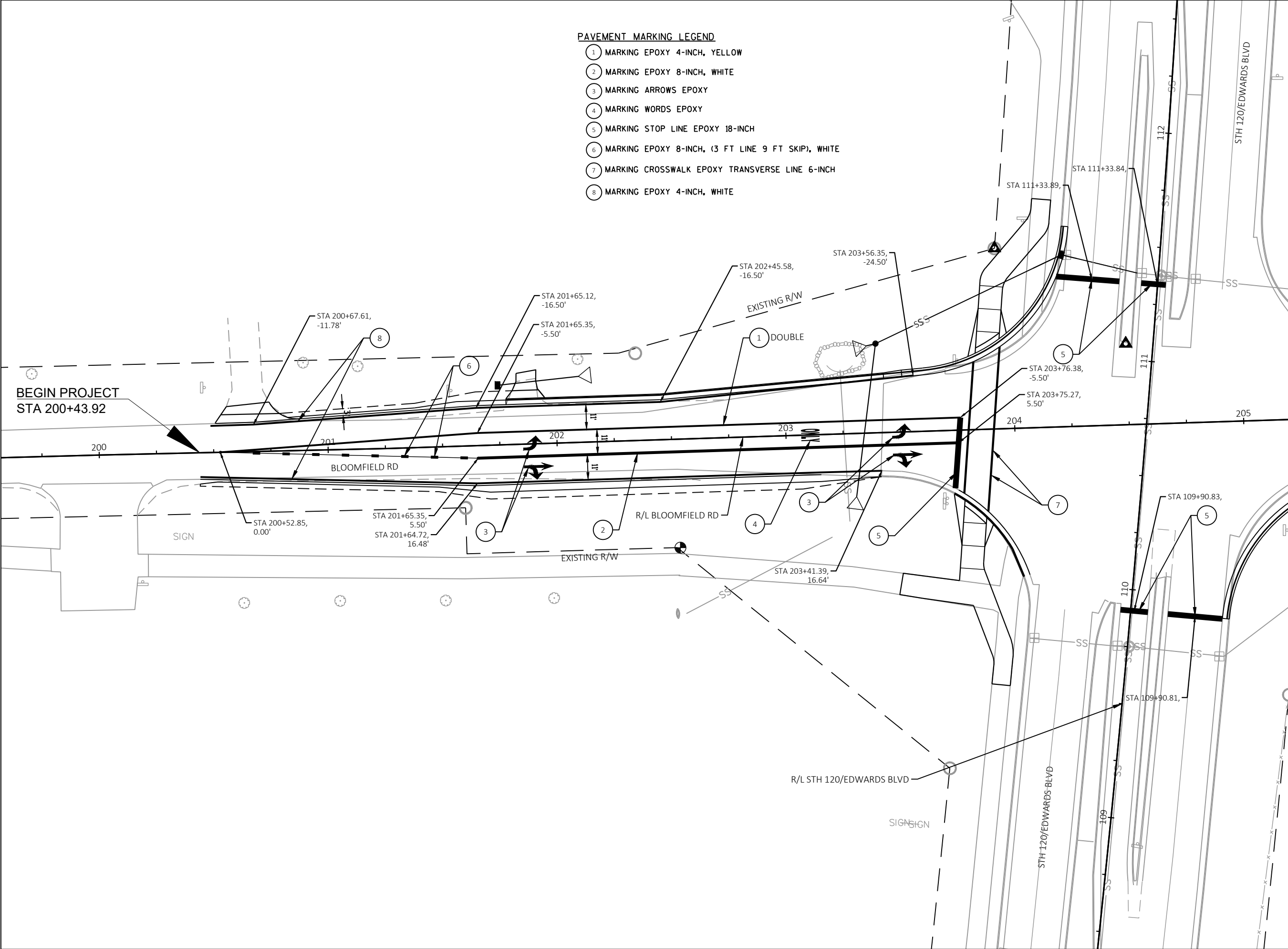


TRAFFIC CONTROL SIGNAL
STH 120 (EDWARDS BLVD) & BLOOMFIELD RD
TOWNSHIP OF BLOOMFIELD
WALWORTH COUNTY

SIGNAL NO. **S64-1496**

REGION CONTACT: D. WOLFORD
DESIGNED BY: KAPUR
REVISED BY:

PAGE 2 OF 2





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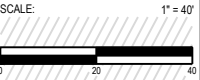
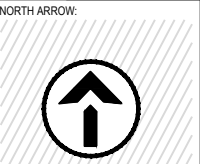
PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION



SEAL:

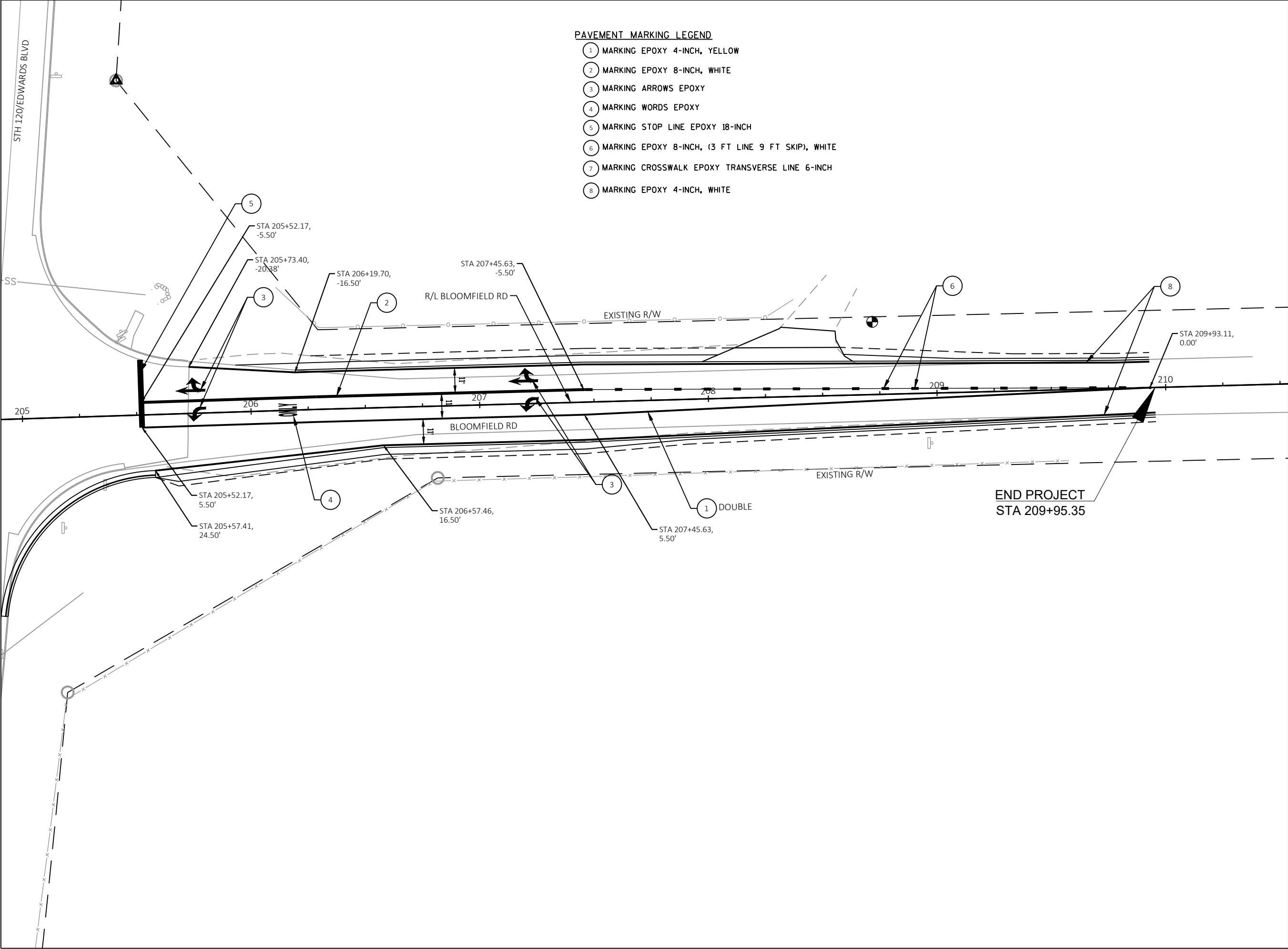
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SHEET:	
PAVEMENT MARKING	
PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
30

PAVEMENT MARKING LEGEND

- 1 MARKING EPOXY 4-INCH, YELLOW
- 2 MARKING EPOXY 8-INCH, WHITE
- 3 MARKING ARROWS EPOXY
- 4 MARKING WORDS EPOXY
- 5 MARKING STOP LINE EPOXY 18-INCH
- 6 MARKING EPOXY 8-INCH, (3 FT LINE 9 FT SKIP), WHITE
- 7 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH
- 8 MARKING EPOXY 4-INCH, WHITE





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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

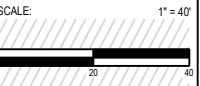
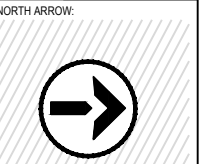
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LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



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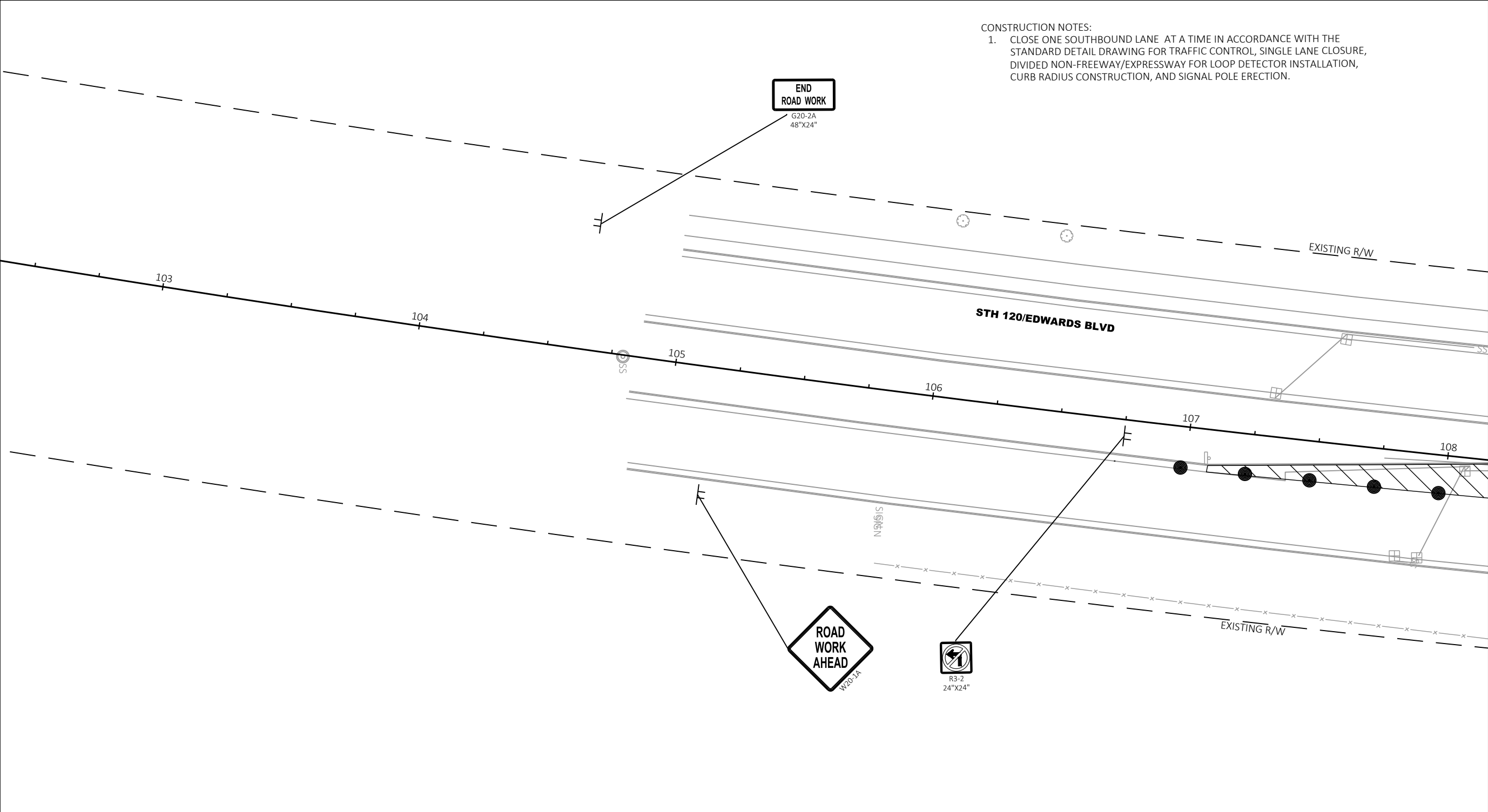
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SHEET:

TRAFFIC CONTROL STAGE 1	
PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
31

- CONSTRUCTION NOTES:
- CLOSE ONE SOUTHBOUND LANE AT A TIME IN ACCORDANCE WITH THE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY FOR LOOP DETECTOR INSTALLATION, CURB RADIUS CONSTRUCTION, AND SIGNAL POLE ERECTION.



- TRAFFIC CONTROL LEGEND**
- WORK ZONE THIS STAGE
 - TEMPORARY PEDESTRIAN SURFACE
 - TEMPORARY PEDESTRIAN BARRICADE
 - BARRICADE TYPE III WITH SIGN
 - BARRICADE TYPE III
 - TRAFFIC CONTROL SIGN(S) ON TEMPORARY SUPPORT
 - PORTABLE CHANGEABLE MESSAGE SIGN
 - TRAFFIC CONTROL DRUM



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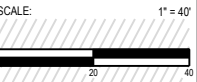
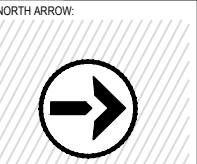
PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION



SEAL:

all in

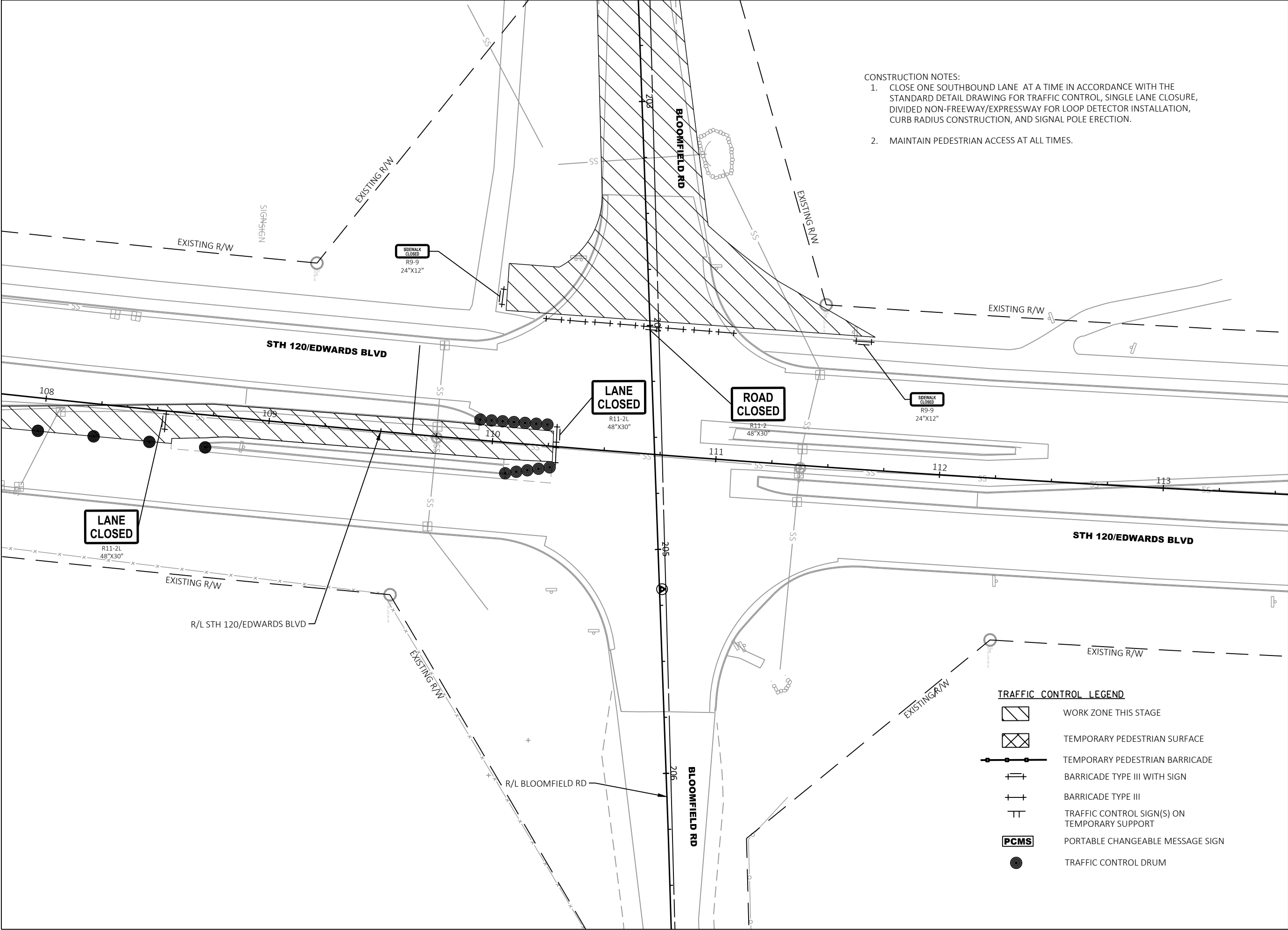
SHEET:
TRAFFIC CONTROL
STAGE 1A

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
32

CONSTRUCTION NOTES:

- CLOSE ONE SOUTHBOUND LANE AT A TIME IN ACCORDANCE WITH THE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY FOR LOOP DETECTOR INSTALLATION, CURB RADIUS CONSTRUCTION, AND SIGNAL POLE ERECTION.
- MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.



TRAFFIC CONTROL LEGEND	
	WORK ZONE THIS STAGE
	TEMPORARY PEDESTRIAN SURFACE
	TEMPORARY PEDESTRIAN BARRICADE
	BARRICADE TYPE III WITH SIGN
	BARRICADE TYPE III
	TRAFFIC CONTROL SIGN(S) ON TEMPORARY SUPPORT
	PORTABLE CHANGEABLE MESSAGE SIGN
	TRAFFIC CONTROL DRUM



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

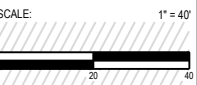
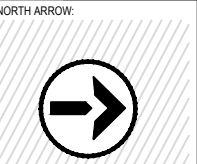
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



SEAL:

all in

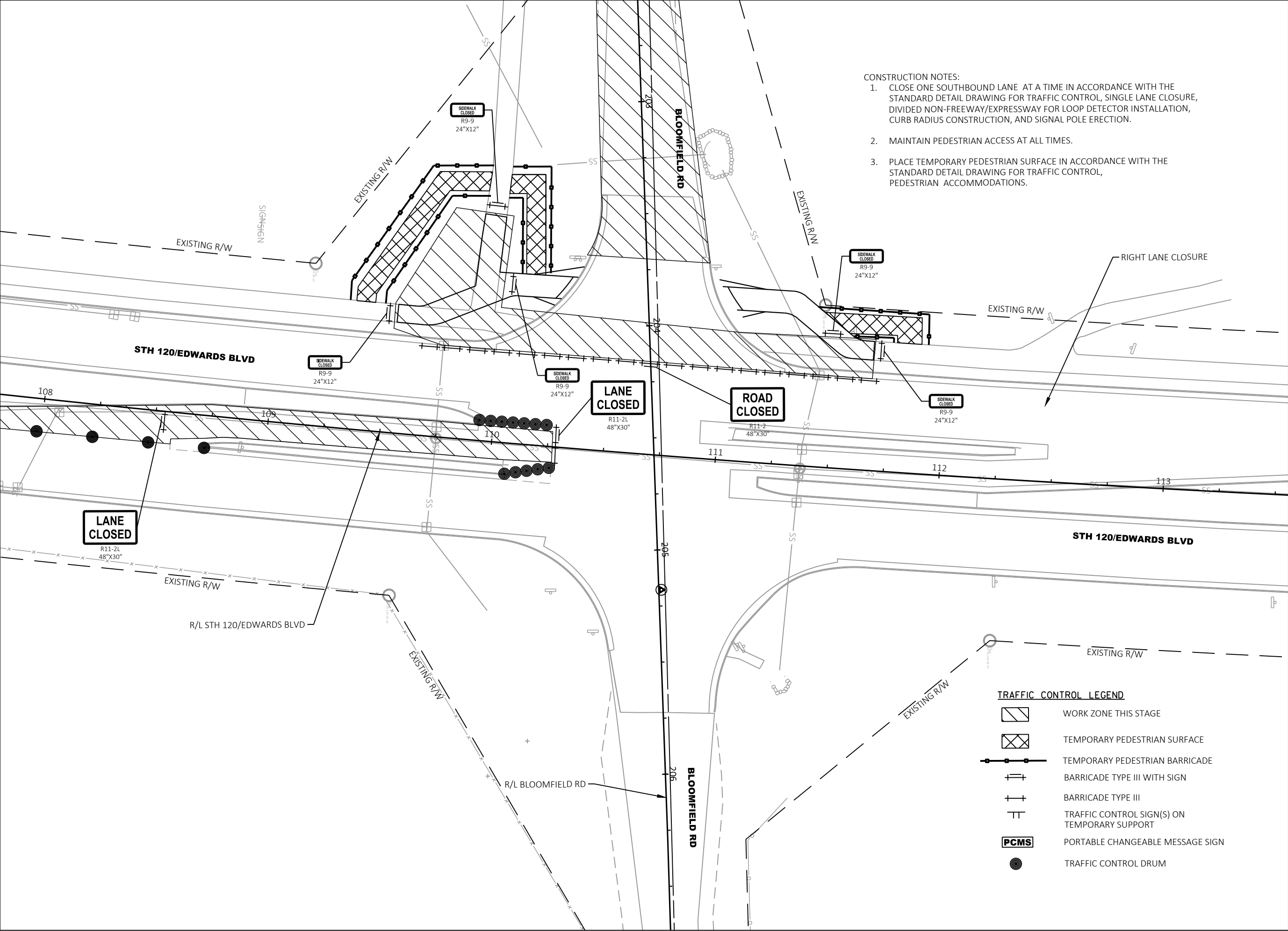
SHEET:
TRAFFIC CONTROL
STAGE 1B

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
33

CONSTRUCTION NOTES:

1. CLOSE ONE SOUTHBOUND LANE AT A TIME IN ACCORDANCE WITH THE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY FOR LOOP DETECTOR INSTALLATION, CURB RADIUS CONSTRUCTION, AND SIGNAL POLE ERECTION.
2. MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.
3. PLACE TEMPORARY PEDESTRIAN SURFACE IN ACCORDANCE WITH THE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATIONS.



TRAFFIC CONTROL LEGEND

-  WORK ZONE THIS STAGE
-  TEMPORARY PEDESTRIAN SURFACE
-  TEMPORARY PEDESTRIAN BARRICADE
-  BARRICADE TYPE III WITH SIGN
-  BARRICADE TYPE III
-  TRAFFIC CONTROL SIGN(S) ON TEMPORARY SUPPORT
-  PORTABLE CHANGEABLE MESSAGE SIGN
-  TRAFFIC CONTROL DRUM

CONSTRUCTION NOTES:
1. CLOSE ONE SOUTHBOUND LANE AT A TIME IN ACCORDANCE WITH THE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY FOR LOOP DETECTOR INSTALLATION, CURB RADIUS CONSTRUCTION, AND SIGNAL POLE ERECTION.

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

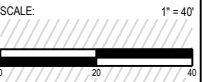
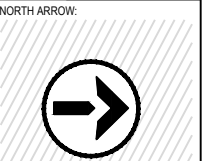
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



SEAL:

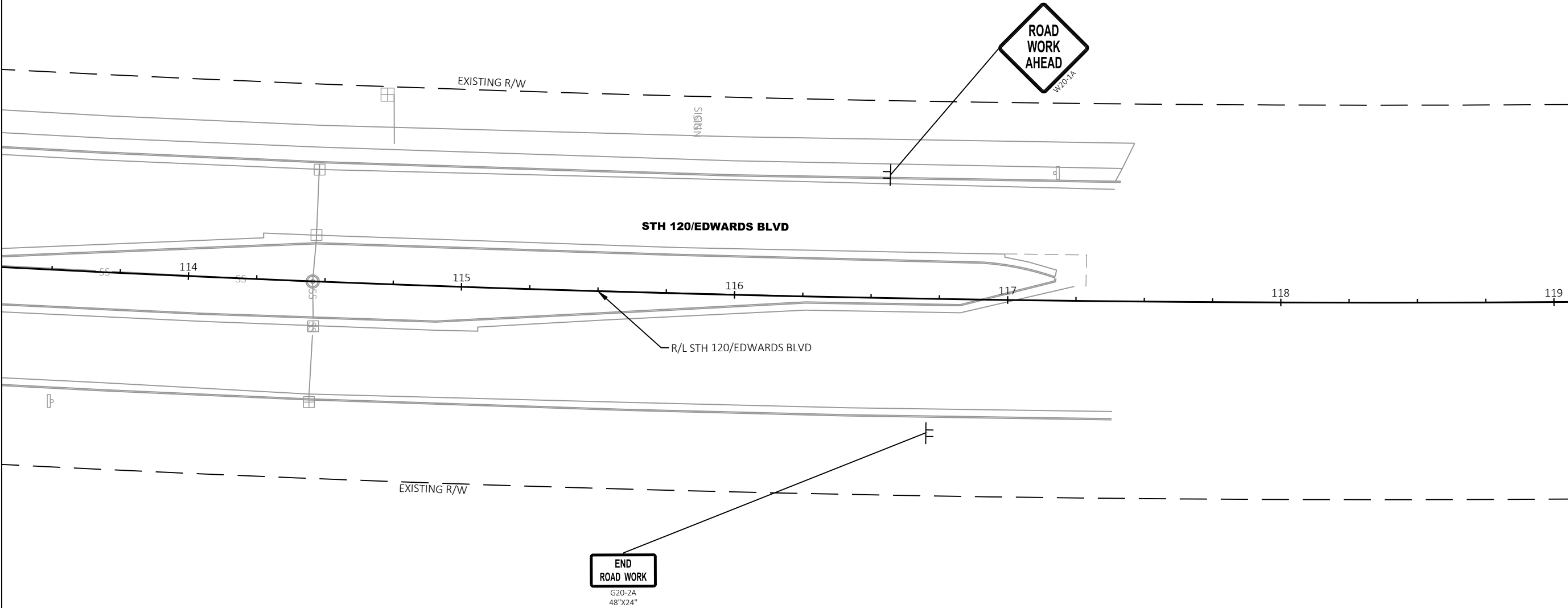
all in

SHEET:

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

34





PROJECT:
ROOMFIELD ROAD
AT STH 120
(TOWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LAKE GENEVA

ENT: _____



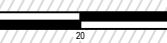
LEASE:
D SET

[illegible]

IRTH ARROW:



1° =



AL:

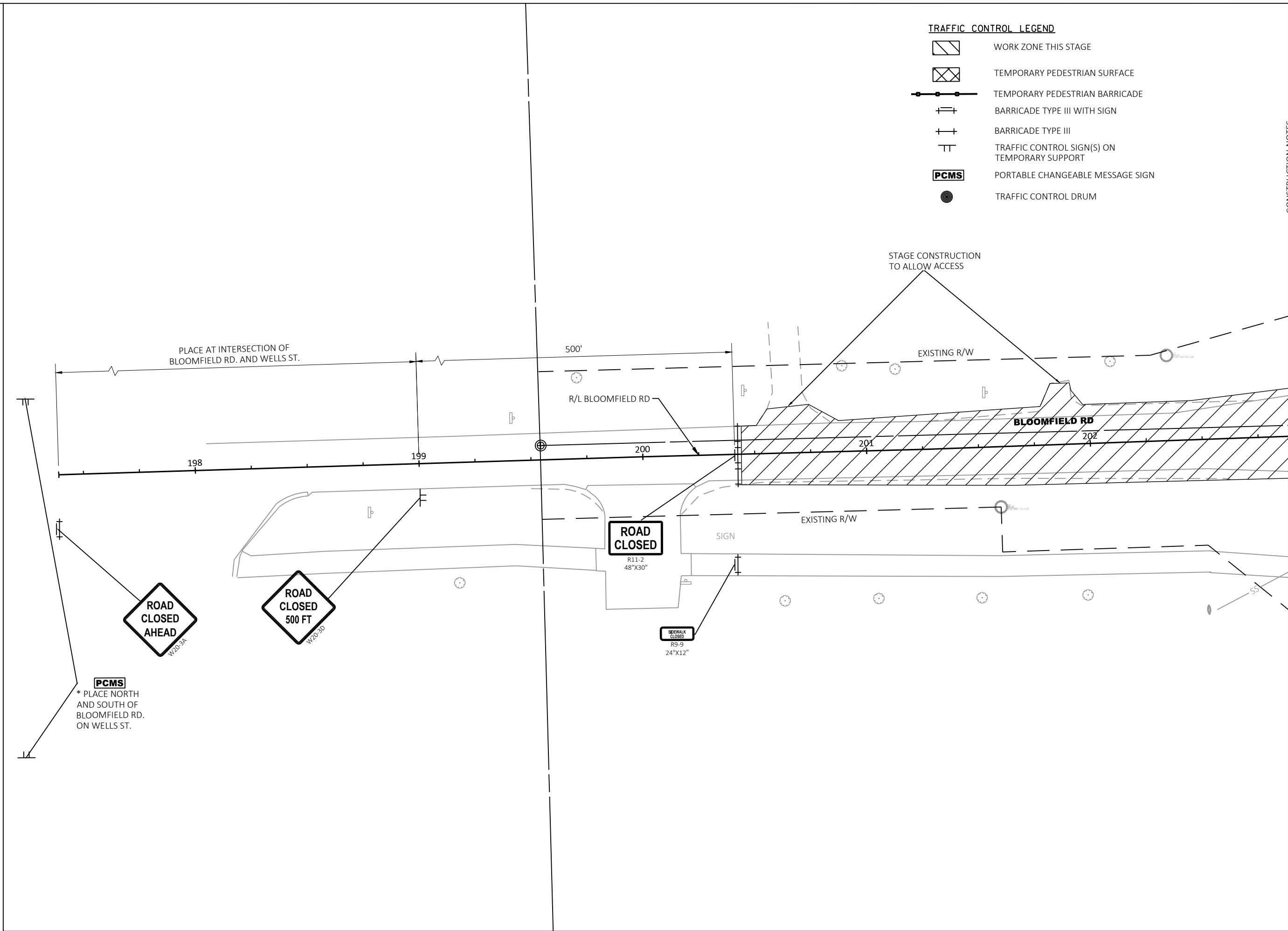
I in

TRAFFIC CONTROL
PAGE 1

PROJECT MANAGER:	GL
PROJECT NUMBER:	21.0437
SIGNED BY:	NR
DRAWN BY:	WAW
CHECKED BY:	AR
DATE:	01/13/20

SHEET NUMBER:

35



TRAFFIC CONTROL DRUM



TRAFFIC CONTROL LEGEND



WORK ZONE THIS STAGE



TEMPORARY PEDESTRIAN SURFACE



TEMPORARY PEDESTRIAN BARRICADE



BARRICADE TYPE III WITH SIGN



BARRICADE TYPE III



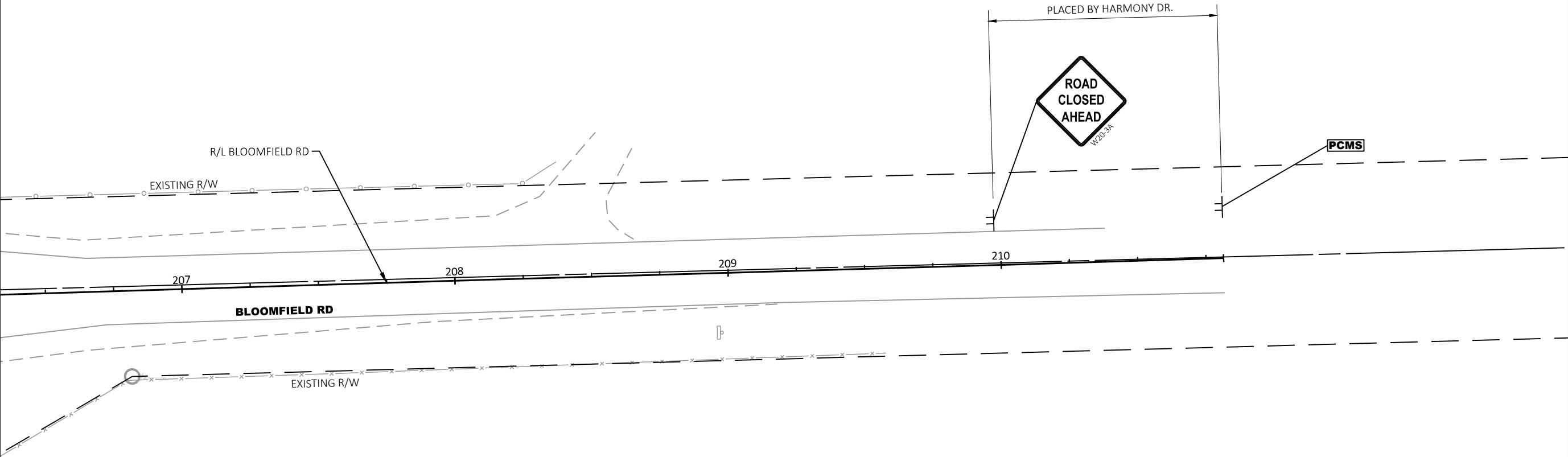
TRAFFIC CONTROL SIGN(S) ON
TEMPORARY SUPPORT



PORTABLE CHANGEABLE MESSAGE SIGN



TRAFFIC CONTROL DRUM



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

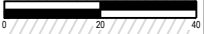
REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 40'



SEAL:

all in

SHEET:

TRAFFIC CONTROL
STAGE 1

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

36



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

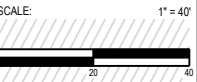
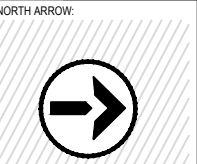
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



SEAL:

all in

SHEET:
TRAFFIC CONTROL
STAGE 2

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
37

CONSTRUCTION NOTES:
1. CLOSE ONE NORTHBOUND LANE AT A TIME IN ACCORDANCE WITH THE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY FOR LOOP DETECTOR INSTALLATION, CURB RADIUS CONSTRUCTION AND SIGNAL POLE ERECTION.

END
ROAD WORK
G20-2A
48"X24"

ROAD
WORK
AHEAD
W20-1A

- TRAFFIC CONTROL LEGEND
- WORK ZONE THIS STAGE
 - TEMPORARY PEDESTRIAN SURFACE
 - TEMPORARY PEDESTRIAN BARRICADE
 - BARRICADE TYPE III WITH SIGN
 - BARRICADE TYPE III
 - TRAFFIC CONTROL SIGN(S) ON TEMPORARY SUPPORT
 - PCMS PORTABLE CHANGEABLE MESSAGE SIGN
 - TRAFFIC CONTROL DRUM



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Milwaukee, Wisconsin 53217
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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1" = 40'

SEAL:

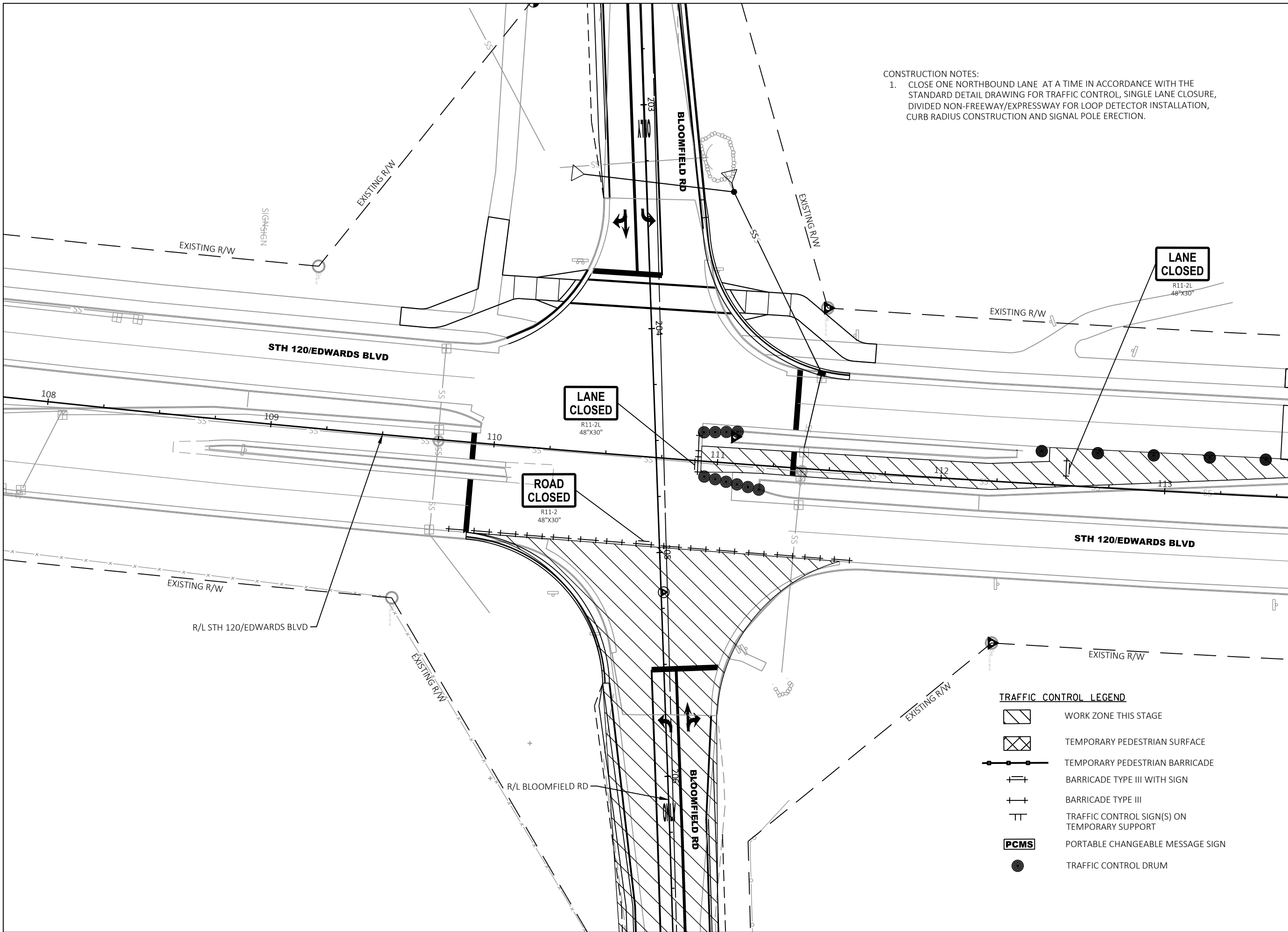
all in

SHEET:

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
38

- CONSTRUCTION NOTES:
1. CLOSE ONE NORTHBOUND LANE AT A TIME IN ACCORDANCE WITH THE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY FOR LOOP DETECTOR INSTALLATION, CURB RADIUS CONSTRUCTION AND SIGNAL POLE ERECTION.



TRAFFIC CONTROL LEGEND

- 

WORK ZONE THIS STAGE
- 

TEMPORARY PEDESTRIAN SURFACE
- 

TEMPORARY PEDESTRIAN BARRICADE
- 

BARRICADE TYPE III WITH SIGN
- 

BARRICADE TYPE III
- 

TRAFFIC CONTROL SIGN(S) ON TEMPORARY SUPPORT
- 

PORTABLE CHANGEABLE MESSAGE SIGN
- 

TRAFFIC CONTROL DRUM

- CONSTRUCTION NOTES:
- CLOSE ONE NORTHBOUND LANE AT A TIME IN ACCORDANCE WITH THE STANDARD DETAIL DRAWING FOR TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY FOR LOOP DETECTOR INSTALLATION, CURB RADIUS CONSTRUCTION AND SIGNAL POLE ERECTION.

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

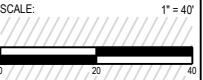
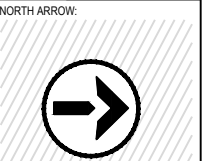
LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION



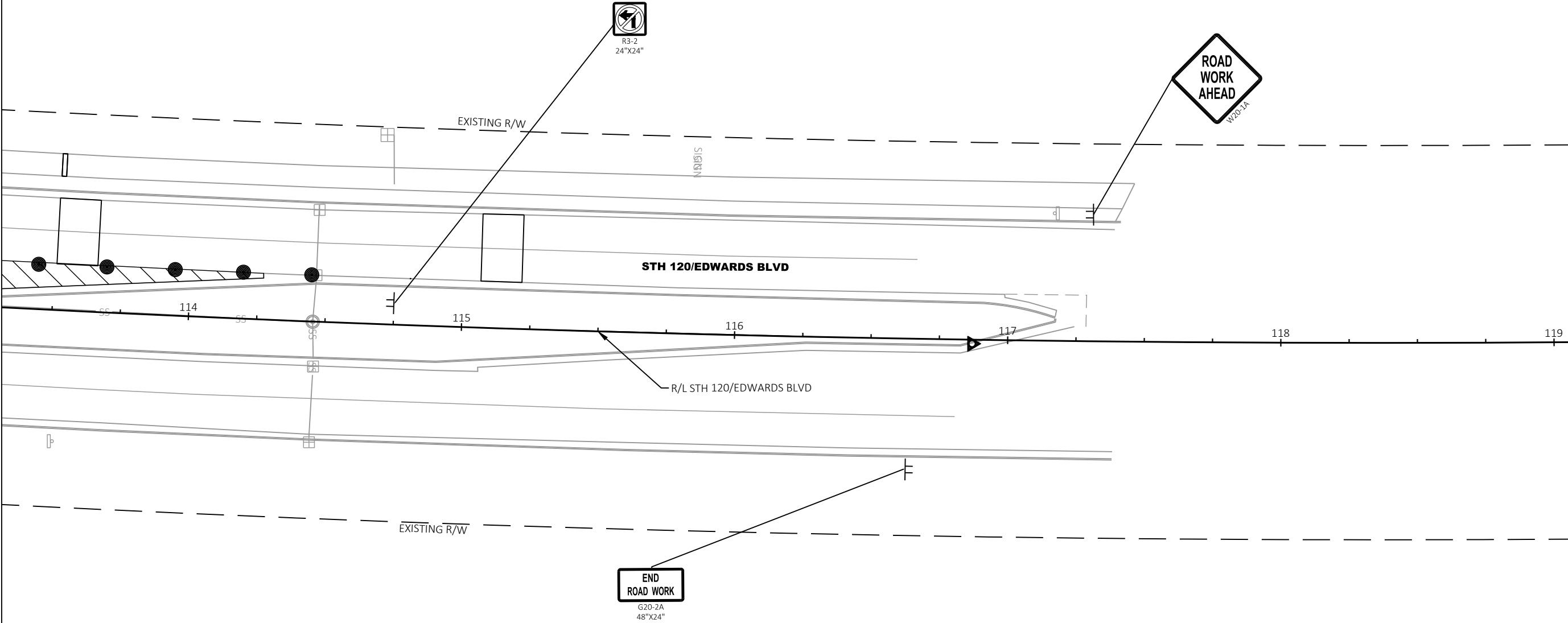
SEAL:

all in

SHEET:
TRAFFIC CONTROL
STAGE 2

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
39





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kapurinc.com

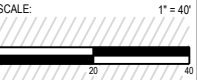
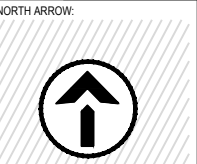
PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION



SEAL:

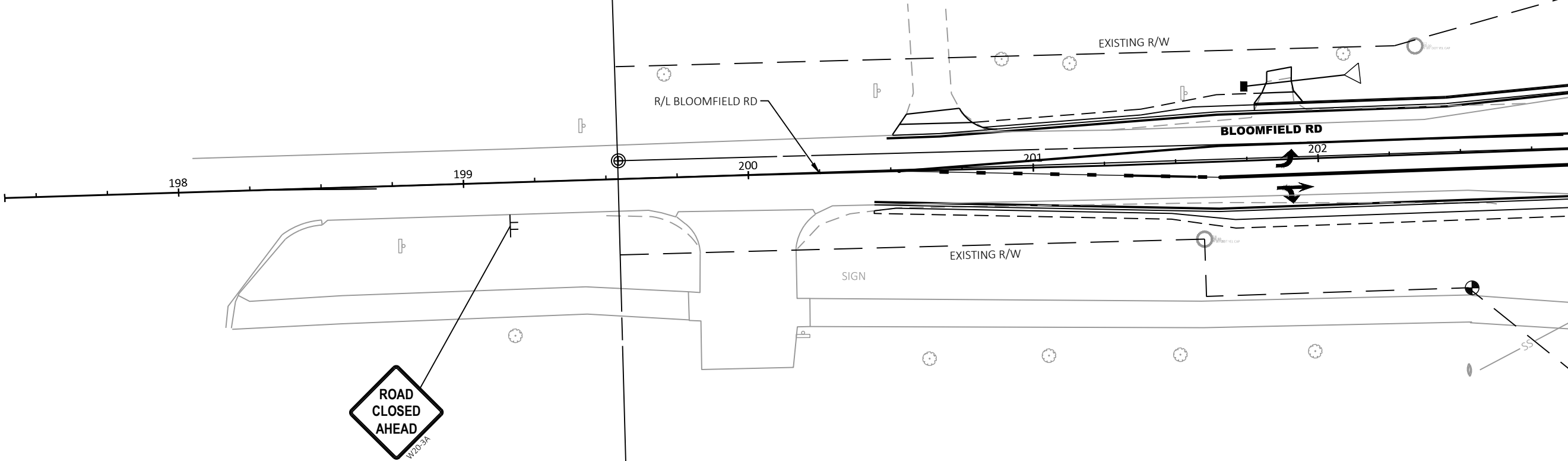
all in

SHEET:	
TRAFFIC CONTROL STAGE 2	
PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
40

TRAFFIC CONTROL LEGEND

- WORK ZONE THIS STAGE
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- BARRICADE TYPE III WITH SIGN
- BARRICADE TYPE III
- TRAFFIC CONTROL SIGN(S) ON TEMPORARY SUPPORT
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- TRAFFIC CONTROL DRUM

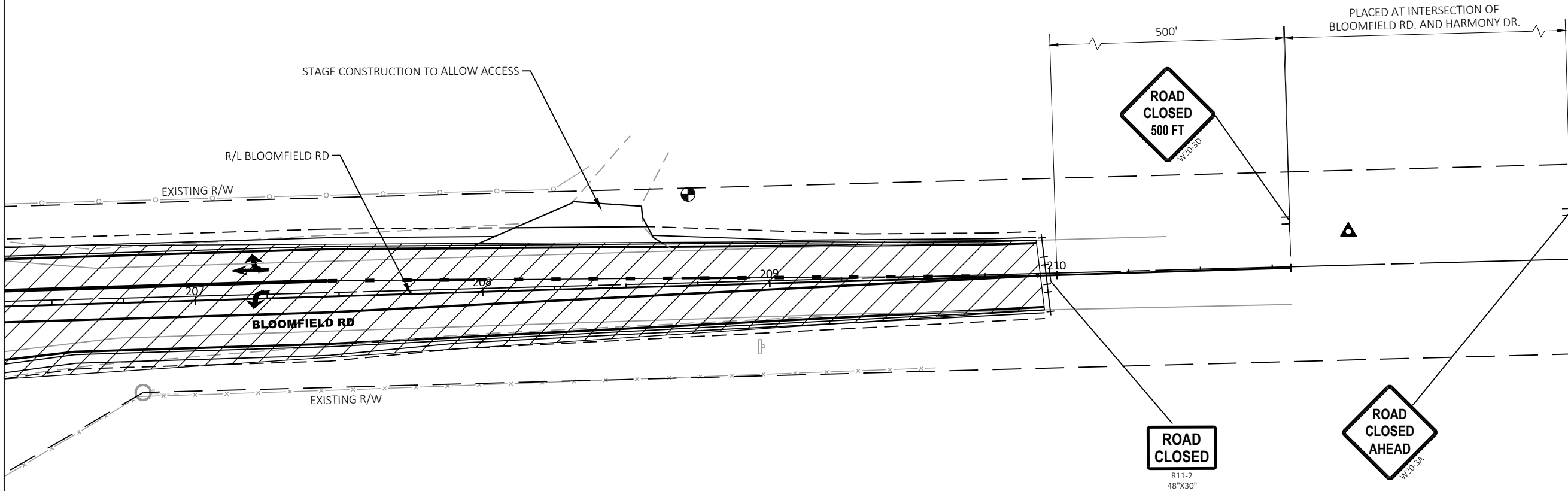


TRAFFIC CONTROL DRUM



TRAFFIC CONTROL LEGEND

- WORK ZONE THIS STAGE
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- BARRICADE TYPE III WITH SIGN
- BARRICADE TYPE III
- TRAFFIC CONTROL SIGN(S) ON TEMPORARY SUPPORT
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- TRAFFIC CONTROL DRUM



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PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: 1" = 40'

SEAL:

all in

SHEET:
TRAFFIC CONTROL
STAGE 2

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
41



PROJECT:
ROOMFIELD ROAD
AT STH 120
(TOWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LAKE GENEVA



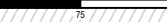
LEASE:
D SET

VISIONS:	
DATE	DESCRIPTION

IRTH ARROW:



SCALE: 1" = 1'



AL:

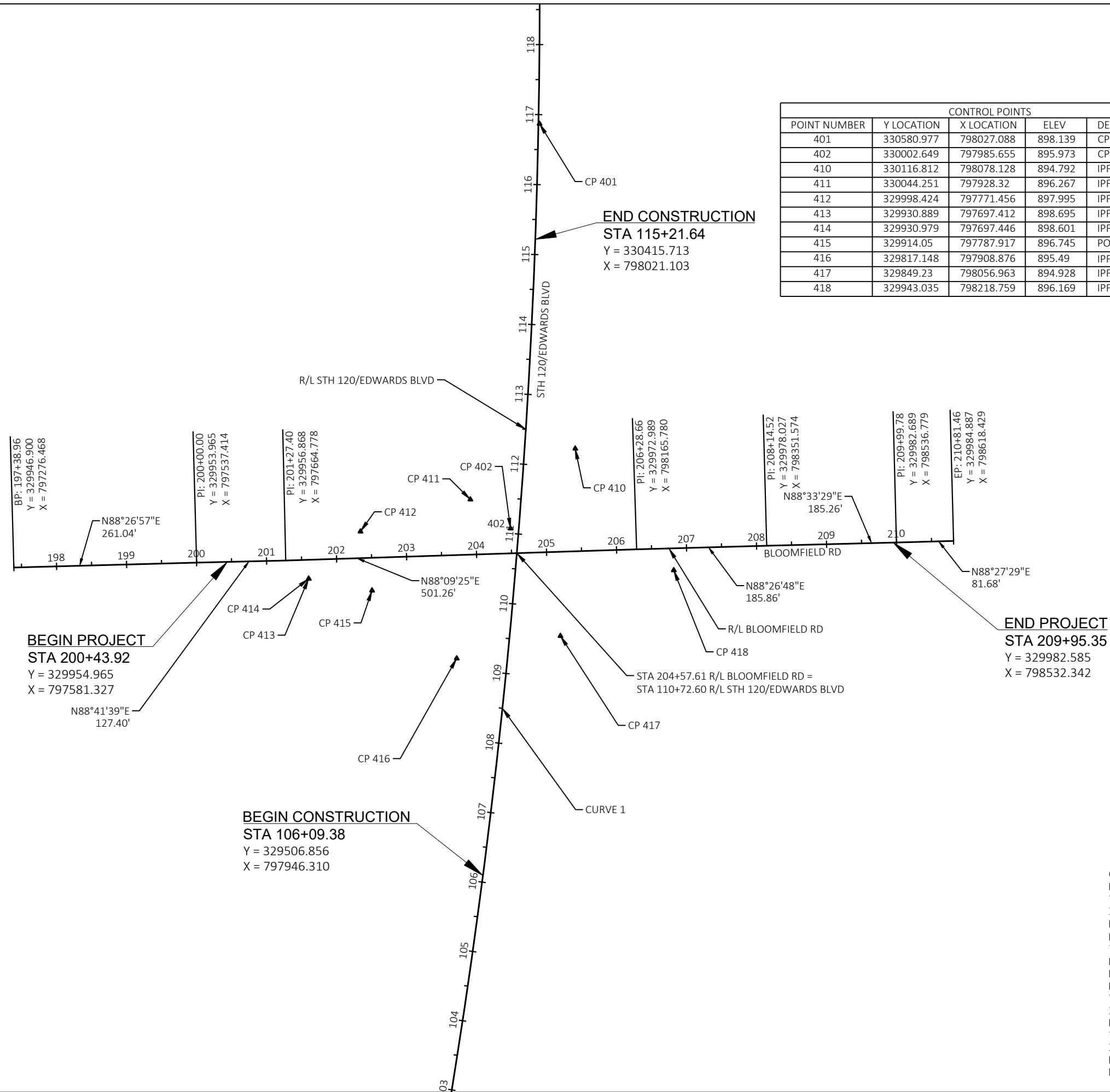
I in

ALIGNMENT PLAN

PROJECT MANAGER:	G
PROJECT NUMBER:	21.0437
SIGNED BY:	N
DRAWN BY:	W
CHECKED BY:	A
DATE:	01/13/20

SHEET NUMBER:

42



CURVE 1
PI STA = 110+85.38
Y = 329971.069
X = 798054.969
DELTA = 12°35'09" LT
D = 0°34'56"
T = 1085.38'
L = 2162.02'
R = 9842.49'
PC STA = 100+00.00
Y = 328905.297
X = 797849.596
PT STA = 121+62.02
Y = 331055.981
X = 798023.175
DB = N10°54'26"E
DA = N01°40'43"W

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:

BID SET

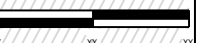
REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: X"=XX'



SEAL:



all in

SHEET:
MISCELLANEOUS
QUANTITIES

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

REMOVALS																					

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED



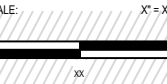
PROJECT:
ROOMFIELD ROAD
RTH 120
(TOWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LAKE GENEVA



VISIONS:	
DATE	DESCRIPTION

ORTH ARROW:

[illegible]

l in

SHEET:
 MISCELLANEOUS
 QUANTITIES

PROJECT MANAGER:	G
PROJECT NUMBER:	21.0437
SIGNED BY:	N
DRAWN BY:	WA
CHECKED BY:	A
DATE:	01/13/20

SHEET NUMBER: _____

44

EXCAVATION COMMON

					205.0100	208.0100	312.0110	645.0220
					EXCAVATION	BORRO	SELECT	
					COMMON	W	CRUSHED	GEOGRID TYPE
STATION	TO	STATION	OFFSET	LOCATION	CY	CY	MATERIAL	SR
							TON	SY
200+44	-	210+00	LT	BLOOMFIELD RD	232	7	--	--
200+44	-	210+00	RT	BLOOMFIELD RD	342	1	--	--
203+56	-	204+26	LT	NW INTERSECTION CURB	78	--	--	--
204+88	-	205+57	RT	SE INTERSECTION CURB	48	2	--	--
SUBTOTAL					700	10	--	--
UNDISTRIBUTED*					70	--	147	70
TOTAL 0010					770	10	147	70

* UNDISTRIBUTED FOR EBS

- 1) Cut Volume Includes Salvaged/Unusable Pavement Material on Bloomfield Road
- 2) EBS Excavation to be backfilled with Select Crushed Material. All EBS material is assumed to be wasted offsite.
- 3) Roadway Embankment = Unexpanded Fill
- 4) The storm sewer excavation is not included in this table and should be considered additional waste and is considered incidental to the storm sewer
- 5) Excess suitable material may be used for embankment on multi-use path

FINISHING ROADWAY

	213.0100.01
	FINISHING
	ROADWAY
	(PROJECT)
	(STH 120 &
	BLOOMFIELD)
LOCATION	EACH
STH 120 & BLOOMFIELD	1
TOTAL 0010	1

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

PROJECT:
ROOMFIELD ROAD
RTH 120
(TOWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

ENT: _____



PLEASE:

MID SET

VISIONS:

DATE	DESCRIPTION

RIGHT ARROW:



SALE: // // // // // X* = Y

[illegible]

l in

SHEET: _____
 MISCELLANEOUS
 QUANTITIES

PROJECT MANAGER:	G
PROJECT NUMBER:	21.0437
SIGNED BY:	N
DRAWN BY:	WA
CHECKED BY:	A
DATE:	01/13/20

SHEET NUMBER: _____

45

BASE AGGREGATE

				305.0110	305.0120	
				BASE	BASE	
				AGGREGATE	AGGREGATE	
				DENSE 3/4-INCH	DENSE 1 1/4-INCH	
STATION	TO	STATION	LOCATION	TON	TON	REMARKS
200+43.79	-	203+41.16	RT	78	--	SHOULDER
200+79.02	-	201+81.08	LT	25	--	SHOULDER
201+92.59	-	203+56.35	LT	41	--	SHOULDER
205+57.41	-	209+95.39	RT	180	--	SHOULDER
205+93.80	-	208+11.93	LT	122	--	SHOULDER
208+58.03	-	209+93.10	LT	54	--	SHOULDER
200+50.99	-	200+87.83	LT	10	10	DRIVEWAY
201+78.15	-	201+97.21	LT	7	5	DRIVEWAY
207+97.65	-	208+63.47	LT	24	33	DRIVEWAY
203+43.32	-	204+24.00	LT	--	33	INTERSECTION CURB & GUTTER
204+89.93	-	205+57.41	RT	--	14	INTERSECTION CURB & GUTTER
201+78.25	-	203+43.32	LT	--	47	NW BLOOMFIELD CURB & GUTTER
200+43.79	-	203+41.23	RT	--	220	UNDER HMA PAVEMENT
200+50.99	-	203+56.35	LT	--	168	UNDER HMA PAVEMENT
205+57.41	-	209+95.35	RT	--	292	UNDER HMA PAVEMENT
205+93.69	-	209+93.10	LT	--	226	UNDER HMA PAVEMENT
203+69.85	-	203+80.22	LT	--	9	UNDER CONCRETE SIDEWALK
203+69.85	-	203+79.85	RT	--	10	UNDER CONCRETE SIDEWALK
203+47.49	-	203+97.72	RT	--	44	UNDER ASPHALTIC SURFACE
203+69.85	-	204+18.85	LT	--	26	UNDER ASPHALTIC SURFACE
204+28.12	-	204+36.39	LT	--	3	UNDER ASPHALTIC SURFACE
203+56.35	-	204+25.99	LT	--	19	UNDER CONCRETE PAVEMENT
204+97.95	-	205+57.41	RT	--	25	UNDER CONCRETE PAVEMENT
TOTAL 0010				541	1,184	

DRILLED BARS

					416.0610	416.0620	
					DRILLED TIE	DRILLED DOWEL	
					BARS	BARS	
STATION	TO	STATION	OFFSET	LOCATION	EACH	EACH	REMARKS
111+56.15	-		LT	EDWARDS BLVD	3	--	C&G MATCHING
109+91.04	-		RT	EDWARDS BLVD	3	--	C&G MATCHING
110+01.58	-		LT	EDWARDS BLVD	3	--	C&G MATCHING
203+74.70	-		RT	BLOOMFIELD RD	3	--	C&G MATCHING
203+43.33	-	204+25.99	LT	BLOOMFIELD RD	42	--	NW G&G
203+74.70	-	204+04.58	RT	BLOOMFIELD RD	17	--	SW C&G
204+87.95	-	205+71.67	RT	BLOOMFIELD RD	38	--	SE C&G
109+46.82	-	109+96.21	RT	EDWARDS BLVD	33	16	LOOPS 11 & 12
115+06.54	-	115+21.64	LT	EDWARDS BLVD	10	32	LOOPS 21 & 22
113+51.00	-	113+66.17	LT	EDWARDS BLVD	10	32	LOOPS 23 & 24
111+29.41	-	111+78.54	LT	EDWARDS BLVD	33	16	LOOPS 51 & 52
106+09.36	-	106+24.36	RT	EDWARDS BLVD	10	32	LOOPS 61 & 62
107+65.84	-	107+80.88	RT	EDWARDS BLVD	10	32	LOOPS 63 & 64
203+41.54	-	203+69.88	LT/RT	BLOOMFIELD RD	16	16	LOOPS 43 & 72
205+47.70	-	205+73.68	LT/RT	BLOOMFIELD RD	17	16	LOOPS 84 & 86
TOTAL 0010					248	192	

CONCRETE PAVEMENT

					415.0090	416.1710	416.1720	
					CONCRETE	CONCRETE	CONCRETE	
					PAVEMENT 9-	PAVEMENT	PAVEMENT	
					INCH	REPAIR	REPLACEMENT	
STATION	TO	STATION	OFFSET	LOCATION	SY	SY	SY	REMARKS
203+56.35	-	204+25.99	LT	BLOOMFIELD RD	42	--	--	NW Curb
204+97.95	-	205+57.41	RT	BLOOMFIELD RD	56	--	--	SE Curb
203+40.83	-	203+69.88	RT	BLOOMFIELD RD	88	--	--	Loops 43 & 72
205+47.70	-	205+73.68	LT	BLOOMFIELD RD	57	--	--	Loops 84 & 86
106+09.36	-	106+24.36	RT	EDWARDS BLVD	--	20	20	Loops 61 & 62
107+65.84	-	107+80.88	RT	EDWARDS BLVD	--	21	21	Loops 63 & 64
109+46.82	-	109+96.21	RT	EDWARDS BLVD	--	33	33	Loops 11 & 12
111+29.41	-	111+78.54	LT	EDWARDS BLVD	--	30	30	Loops 51 & 52
113+51.00	-	113+66.17	LT	EDWARDS BLVD	--	20	20	Loops 23 & 24
115+06.54	-	115+21.64	LT	EDWARDS BLVD	--	21	21	Loops 21 & 22
TOTAL 0010					243	145	145	

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED



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Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:

SCALE: X" = XX"

XX' XX' XX'

SEAL:

all in

SHEET:

MISCELLANEOUS
QUANTITIES

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

46

ASPHALT

			455.0605	460.5223	460.5224	465.0105	465.0110		
			TACK	HMA	HMA	ASPHALTIC	ASPHALTIC		
			COAT	PAVEMENT 3 LT	PAVEMENT 4 LT	SURFACE	SURFACE		
				58-28 S	58-28 S		PATCHING		
STATION	TO	STATION	LOCATION	GAL	TON	TON	TON	TON	REMARKS
200+43.79	-	203+41.23	RT	18	34	26	--	--	
200+50.99	-	203+56.35	LT	14	26	20	--	--	
205+57.41	-	209+95.35	RT	24	45	35	--	--	
205+93.69	-	209+93.10	LT	19	35	27	--	--	
200+50.99	-	200+87.83	LT	--	2	1	--	--	DRIVEWAY
201+78.15	-	201+97.21	LT	--	1	1	--	--	DRIVEWAY
207+97.65	-	208+63.47	LT	--	5	4	--	--	DRIVEWAY
203+47.49	-	203+97.72	RT	--	--	--	18	--	S SIDEWALK
203+69.85	-	204+18.85	LT	--	--	--	11	--	N SIDEWALK
204+28.12	-	204+36.39	LT	--	--	--	1	--	N SIDEWALK REPLACEMENT
LOOPS				--	--	--		21	LOOPS
TOTAL 0010				75	148	114	30	21	

STORM SEWER

				520.8000	522.1012	522.1015	608.0312	608.0315	608.0324	611.0530	611.0606	611.0642	611.2005	611.3220	611.3901	633.5200					
				CONCRETE	APRON	APRON	STORM	STORM	STORM	MANHOLE	INLET	INLET	MANHOLES	INLETS	INLETS	MARKERS					
				COLLARS FOR	ENDWALLS	ENDWALLS	SEWER PIPE	SEWER PIPE	SEWER PIPE	COVERS	COVERS	COVERS	5-FT	2X2-FT	MEDIAN	CULVERT					
				PIPE	FOR CULVERT	FOR CULVERT	REINFORCE	REINFORCED	REINFORCED	TYPE J	TYPE B	TYPE MS	DIAMETER		1 GRATE	END					
					PIPE	PIPE	D CONCRETE	CONCRETE	CONCRETE												
					REINFORCED	REINFORCED	CLASS III 12-	CLASS III 15-	CLASS III 24-												
					CONCRETE 12-	CONCRETE 15-	INCH	INCH	INCH												
STRUCTURE FROM -	TO	STATION	OFFSET*	LOCATION	EACH	EACH	LF	LF	LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	RIM**	DEPTH****	INVERT***	DISCHARGE	SLOPE
43		201+74.82	26.04' LT	BLOOMFIELD RD	--	--	--	--	--	--	--	1	--	--	1	--	897.46	2.79	894.67	--	--
47		202+10.18	29.22' LT	BLOOMFIELD RD	--	1	--	--	--	--	--	--	--	--	1	--	--	--	895.35	--	--
1		203+30.04	27.60' RT	BLOOMFIELD RD	--	--	1	--	--	--	--	--	--	--	1	--	--	--	893.22	--	--
3		203+36.52	41.17' LT	BLOOMFIELD RD	--	--	1	--	--	--	--	--	--	--	1	--	--	--	892.10	--	--
5		203+40.35	38.92' LT	BLOOMFIELD RD	--	--	--	--	--	1	--	--	1	--	--	--	895.11	2.72	891.40	--	--
8		204+22.70	75.12' LT	BLOOMFIELD RD	--	--	--	--	--	--	1	--	--	1	--	--	895.33	4.69	889.56	--	--
P2	1	- 5		BLOOMFIELD RD	--	--	--	67	--	--	--	--	--	--	--	--	--	--	893.22	892.12	0.0163
P4	5	- 3		BLOOMFIELD RD	--	--	--	4	--	--	--	--	--	--	--	--	--	--	892.10	892.06	0.0109
P9	8	- CC-2		BLOOMFIELD RD	1	--	--	--	7	--	--	--	--	--	--	--	--	--	889.57	889.53	0.0050
P44	43	47		BLOOMFIELD RD	--	--	36	--	--	--	--	--	--	--	--	--	--	--	895.50	895.35	0.0042
P7	8	- CC-1		BLOOMFIELD RD	1	--	--	--	14	--	--	--	--	--	--	--	--	--	889.89	889.56	0.0237
TOTAL 0010					2	1	2	36	71	21	1	1	1	1	1	3					

REMARKS:

*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE

**RIM ELEV IS AT THE INLET COVER FLANGE LOCATION

***FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE

****DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



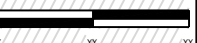
RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 100'



SEAL:



all in

SHEET:
MISCELLANEOUS
QUANTITIES

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

CURB & GUTTER						
			601.0411	601.0555		
			CONCRETE	CONCRETE CURB		
			CURB & GUTTER	& GUTTER 6-		
			30-INCH TYPE D	INCH SLOPED 36-		
				INCH TYPE A		
STATION	TO	STATION	LOCATION	LF	LF	REMARKS
201+78.25	-	203+43.32	LT	166	--	NW
203+43.32	-	204+24.00	LT	--	113	Intersection NW
203+74.70	-	204+04.58	RT	--	49	Intersection SW
204+89.93	-	205+57.41	RT	--	99	Intersection SE
TOTAL 0010				166	261	

CONCRETE SIDEWALK							
				602.0410	602.0605		
				CONCRETE	CURB RAMP		
				SIDEWALK 5-	DETECTABLE		
				INCH	WARNING		
					FIELD RADIAL		
					YELLOW		
CATEGORY	STATION	TO	STATION	LOCATION	SF	SF	REMARKS
0010	203+80.56	-	203+97.62	LT	188	25	N SIDEWALK
0010	203+74.71	-	203+89.21	RT	213	24	S SIDEWALK
TOTAL 0010					401	49	

FENCE SAFETY	
616.0700.S	
FENCE	
SAFETY	
STATION	LF
UNDISTRIBUTED	750
TOTAL 0010	750

MOBILIZATION	
619.1000	
MOBILIZATION	
LOCATION	EACH
STH 120 & BLOOMFIELD	1
TOTAL 0010	1

DUST CONTROL		
623.0200		
DUST		
CONTROL		
SURFACE		
LOCATION	SY	WATER
STH 120 & BLOOMFIELD	2,339	4
TOTAL 0010	2,339	4

EROSION CONTROL & RESTORATION						
628.1504						
628.1520						
628.7020						
628.7504						
628.7555						
SPV.0180.01						
SPECIAL						
(RESTORE						
DISTURBED						
AREAS)						
LOCATION	SILT FENCE	SILT FENCE	INLET	TEMPORARY	CULVERT	
	LF	MAINTENANCE	PROTECTION	DITCH	PIPE CHECKS	
			TYPE D	CHECKS		
			EACH			
				LF	EACH	SY
West Half	743	743	7	--	2	1,054
East Half	947	947	6	--	2	672
SUM	1,690	1,690	13	--	4	1,726
UNDISTRIBUTED	423	423	6	30	--	173
TOTAL 0010	2,113	2,113	19	30	4	1,899

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

kapur

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

CLIENT:

The logo of the City of Lake Geneva, Wisconsin, is a circular seal. It features a sailboat on the water in the foreground, with a lighthouse and a smaller boat in the background. The text "CITY OF LAKE GENEVA" is arched across the top, and "WISCONSIN" is arched across the bottom. Two stars are positioned on the left and right sides of the seal.

REVISIONS:		
#	DATE	DESCRIPTION



all in

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

48

TOTAL 0010

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

TRAFFIC CONTROL																				
					643.0300 TRAFFIC CONTROL		643.0420 TRAFFIC CONTROL		643.0715 TRAFFIC CONTROL		643.0800 TRAFFIC CONTROL		643.0900 TRAFFIC CONTROL		643.1050 TRAFFIC CONTROL		644.1420 TEMPORARY PEDESTRIAN		644.1810 TEMPORARY PEDESTRIAN	
STAGE DURATION					DRUMS		BARRICADES		WARNING		ARROW		SIGNS		SIGNS PCMS		SURFACE		BARRICADE	
STAGE	STATION TO	STATION	DAYS	LOCATION	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	EACH**	DAY	SF		LF	
1	104+64	-	57	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	57	--	--	--		--	
1	105+15	-	57	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	57	--	--	--		--	
1	106+75	-	57	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	57	--	--	--		--	
1	106+98	- 108+73	57	STH 120/EDWARDS BLVD	8	456	--	--	--	--	--	--	--	--	--	--	--		--	
1	108+54	-	57	STH 120/EDWARDS BLVD	--	--	1	57	--	--	--	--	1	57	--	--	--		--	
1	109+94	- 110+26	57	STH 120/EDWARDS BLVD	12	684	--	--	--	--	--	--	--	--	--	--	--		--	
1	110+30	-	57	STH 120/EDWARDS BLVD	--	--	2	114	--	--	--	--	1	57	--	--	--		--	
1	116+56	-	57	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	57	--	--	--		--	
1	116+71	-	57	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	57	--	--	--		--	
1	185+00	-	57	BLOOMFIELD RD	--	--	--	--	--	--	--	--	--	--	2	114	--		--	
1	197+39	-	57	BLOOMFIELD RD	--	--	1	57	--	--	--	--	1	57	--	--	--		--	
1	199+00	-	57	BLOOMFIELD RD	--	--	--	--	--	--	--	--	1	57	--	--	--		--	
1	200+41	-	57	BLOOMFIELD RD	--	--	1	57	--	--	--	--	1	57	--	--	--		--	
1	200+42	-	57	BLOOMFIELD RD	--	--	3	171	--	--	--	--	1	57	--	--	--		--	
1A	203+85	- 204+12	29	BLOOMFIELD RD	--	--	10	285	--	--	--	--	3	86	--	--	--		--	
1B	203+25	- 203+90	29	BLOOMFIELD RD	--	--	3	86	--	--	--	--	3	86	--	--	1,159		277	
1B	203+94	- 204+15	29	BLOOMFIELD RD	--	--	2	57	--	--	--	--	2	57	--	--	361		83	
1B	204+05	- 204+28	29	BLOOMFIELD RD	--	--	19	542	--	--	--	--	1	29	--	--	--		--	
1	209+98	-	57	BLOOMFIELD RD	--	--	--	--	--	--	--	--	1	57	--	--	--		--	
1	210+98	-	57	BLOOMFIELD RD	--	--	--	--	--	--	--	--	--	--	1	57	--		--	
1	UNDISTRIBUTED		29		71	2,033	2	66	28	787	2	66	25	721	--	--	--		--	
TOTAL STAGE 1						3,173		1,491		787		66		1,662		171		1,521		361
2	104+82	-	49	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	49	--	--	--		--	
2	104+91	-	49	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	49	--	--	--		--	
2	110+90	-	49	STH 120/EDWARDS BLVD	--	--	2	98	--	--	--	--	1	49	--	--	--		--	
2	110+93	- 111+19	49	STH 120/EDWARDS BLVD	10	490	--	--	--	--	--	--	--	--	--	--	--		--	
2	112+56	-	49	STH 120/EDWARDS BLVD	--	--	1	49	--	--	--	--	1	49	--	--	--		--	
2	112+44	- 114+44	49	STH 120/EDWARDS BLVD	9	441	--	--	--	--	--	--	--	--	--	--	--		--	
2	114+75	-	49	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	49	--	--	--		--	
2	116+63	-	49	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	49	--	--	--		--	
2	117+31	-	49	STH 120/EDWARDS BLVD	--	--	--	--	--	--	--	--	1	49	--	--	--		--	
2	199+16	-	49	BLOOMFIELD RD	--	--	--	--	--	--	--	--	1	49	--	--	--		--	
2	204+86	- 205+07	49	BLOOMFIELD RD	--	--	15	735	--	--	--	--	1	49	--	--	--		--	
2	209+95	- 209+98	49	BLOOMFIELD RD	--	--	3	147	--	--	--	--	1	49	--	--	--		--	
2	215+00	-	49	BLOOMFIELD RD	--	--	--	--	--	--	--	--	1	49	--	--	--		--	
2	222+10	-	49	BLOOMFIELD RD	--	--	--	--	--	--	--	--	1	49	--	--	--		--	
2	UNDISTRIBUTED		25		71	1,783	2	58	28	690	2	58	25	633	--	--	--		--	
TOTAL STAGE 2						2,714		1,087		690		58		1,221		0		0		0
TOTAL 0010						5,887		2,578		1,477		124		2,883		171		1,521		361

**FOR INFORMATION ONLY

PAVEMENT MARKING											
					646.1020	646.3020		646.5020	646.5120	646.6120	646.7420
					MARKING LINE	MARKING LINE	MARKING LINE			MARKING	CROSSWALK
					EPOXY 4-INCH	EPOXY 4-INCH	LINE EPOXY 8-	EPOXY 8-INCH	MARKING	STOP LINE	EPOXY
					(YELLOW)	(WHITE)	INCH (WHITE)	(WHITE) (3 FT	ARROW EPOXY	WORD EPOXY	TRANSVERSE
STATION	TO	STATION	OFFSET	LOCATION	LF	LF	LF	LINE 9 FT SKIP)	EACH	EACH	LINE 6-INCH
200+47.55	-	204+57.61	LT/RT	BLOOMFIELD RD	647	605	210	28	4	1	130
204+57.61	-	209+94.24	LT/RT	BLOOMFIELD RD	882	858	193	62	4	1	--
108+71.66	-	112+47.83	LT/RT	EDWARDS BLVD	--	--	--	--	--	--	--
SUM					1,529	1,464	403	90	8	2	130
TOTAL 0010					2,993		493		8	2	130



7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

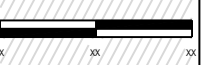
REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1"=XX'



SEAL:



all in

SHEET:
MISCELLANEOUS
QUANTITIES

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

49

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

CONDUIT				
		652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	652.0615 CONDUIT SPECIAL 3-INCH
FROM	TO	LF	LF	LF
CB1	PB1	--	21	--
PB1	PB2	--	161	--
PB2	SB1	22	--	--
PB2	PB3	232	--	--
PB2	PB4	--	--	116
PB4	SB2	--	24	--
PB4	PB5	--	125	--
PB5	SB3	15	--	--
PB5	PB6	232	--	--
PB6	SB12	67	--	--
PB6	PB7	154	--	--
PB5	PB8	--	--	87
PB8	SB4	10	--	--
PB8	PB9	--	--	43
PB9	PB10	--	--	131
PB10	SB5	--	33	--
PB10	SB6	14	--	--
PB10	PB11	--	93	--
PB11	SB7	25	--	--
PB11	PB12	198	--	--
PB12	PB13	151	--	--
PB11	PB14	--	--	125
PB14	SB8	--	49	--
PB14	PB15	--	214	--
PB15	SB9	6	--	--
PB15	PB16	216	--	--
PB16	PB17	150	--	--
PB15	PB18	--	--	68
PB18	SB10	6	--	--
PB18	PB19	--	--	45
PB19	SB13	--	13	--
PB19	PB20	--	--	73
PB20	SB11	--	8	--
PB20	PB21	--	95	--
PB21	CB1	--	27	--
TOTAL 0010		1,498	863	688

LOOP & EVP DETECTOR CABLE						
		652.0800	655.0210	655.0700	655.0800	655.0900
		CONDUIT LOOP DETECTOR	CABLE TRAFFIC SIGNAL 3-14 AWG	LOOP DETECTOR LEAD IN CABLE	LOOP DETECTOR WIRE	TRAFFIC SIGNAL EVP DETECTOR CABLE
FROM	TO	LF	LF	LF	LF	LF
CB1	Loop 11	73	--	76	198	--
CB1	Loop 12	65	--	76	183	--
CB1	Loop 21	41	--	566	178	--
CB1	Loop 22	53	--	566	203	--
CB1	Loop 23	37	--	412	158	--
CB1	Loop 24	47	--	412	179	--
CB1	Loop 41	38	--	292	160	--
CB1	Loop 42	66	--	60	184	--
CB1	Loop 43	66	--	60	184	--
CB1	Loop 51	88	--	224	228	--
CB1	Loop 52	61	--	224	175	--
CB1	Loop 61	43	--	497	183	--
CB1	Loop 62	55	--	497	207	--
CB1	Loop 63	36	--	348	145	--
CB1	Loop 64	48	--	348	169	--
CB1	Loop 71	74	--	60	201	--
CB1	Loop 72	75	--	60	203	--
CB1	Loop 81	42	--	649	180	--
CB1	Loop 82	40	--	499	165	--
CB1	Loop 83	65	--	301	182	--
CB1	Loop 84	68	--	301	188	--
CB1	Loop 85	76	--	301	204	--
CB1	Loop 86	77	--	301	206	--
CB1	SB11 (HEAD A)	--	130	--	--	130
CB1	SB5 (HEAD B)	--	458	--	--	458
CB1	SB8 (HEAD C)	--	410	--	--	410
CB1	SB2 (HEAD D)	--	242	--	--	242
TOTAL 0010		1,334	1,240	7,132	4,263	1,240

UNDERGROUND TRAFFIC SIGNAL CABLE

* 655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG					655.0260 CABLE TRAFFIC SIGNAL 12-14	
FROM	TO	LF			LF	
CB1	SB1	--			139	
CB1	SB2	--			207	
CB1	SB3	--			274	
CB1	SB4	328			--	
CB1	SB5	470			--	
CB1	SB6	451			--	
CB1	SB7	452			--	
CB1	SB8	--			399	
CB1	SB9	--			233	
CB1	SB10	184			--	
CB1	SB11	95			--	
TOTAL 0010		1,980			1,252	

* ADDITIONAL QUANTITIES FOUND ELSEWHERE

ABOVE GROUND TRAFFIC SIG CABLE

* 655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG				655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	
TO		AWG		AWG	
FROM HEAD NO.	LF			LF	
SB1	14	--		19	
SB1	16	19		--	
SB1	21	15		--	
SB2	12	45		--	
SB2	13	19		--	
SB2	15	--		57	
SB2	22	15		--	
SB3	4	--		19	
SB3	6	19		--	
SB4	5	--		19	
SB5	2	54		--	
SB5	3	42		--	
SB6	19	--		19	
SB7	11	19		--	
SB8	17	50		--	
SB8	18	19		--	
SB8	20	--		61	
SB9	1	19		--	
SB9	9	--		19	
SB10	10	--		19	
SB11	7	48		--	
SB11	8	36		--	
TOTAL 0010		419		232	

* ADDITIONAL QUANTITIES FOUND ELSEWHERE



7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:


RELEASE:
BID SET

REVISIONS:

#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: X" = XX'



SEAL:



all in

SHEET:
MISCELLANEOUS
QUANTITIES

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
50

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT: _____



RELEASE:

BID SET

REVISIONS:

[illegible]

NORTH ARROW:



SCALE: $X^* = XX'$



SEAL:

all in

SHEET:

MISCELLANEOUS
QUANTITIES

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

51

				653.0135	653.0140
				PULL BOXES	PULL BOXES
				STEEL 24X36-	STEEL 24X42-
				INCH	INCH
PULL BOX NO.	STATION	OFFSET	LOCATION	EACH	EACH
PB1	203+55.44	78.46' RT	BLOOMFIELD RD	--	1
PB2	203+54.39	24.86' RT	BLOOMFIELD RD	--	1
PB3	201+23.46	21.09' RT	BLOOMFIELD RD	1	--
PB4	203+55.59	32.85' LT	BLOOMFIELD RD	--	1
PB5	111+23.31	55.08' LT	EDWARDS BLVD	--	1
PB6	113+54.64	46.66' LT	EDWARDS BLVD	1	--
PB7	115+09.06	46.78' LT	EDWARDS BLVD	1	--
PB8	111+22.77	12.03' LT	EDWARDS BLVD	--	1
PB9	111+22.51	9.15' RT	EDWARDS BLVD	--	1
PB10	205+36.82	40.54' LT	BLOOMFIELD RD	--	1
PB11	205+74.62	27.06' LT	BLOOMFIELD RD	--	1
PB12	207+72.15	25.88' LT	BLOOMFIELD RD	1	--
PB13	209+22.03	20.01' LT	BLOOMFIELD RD	1	--
PB14	205+68.74	34.68' RT	BLOOMFIELD RD	--	1
PB15	109+85.51	46.17' RT	EDWARDS BLVD	--	1
PB16	107+70.90	49.49' RT	EDWARDS BLVD	1	--
PB17	106+22.50	49.39' RT	EDWARDS BLVD	1	--
PB18	109+85.56	12.50' RT	EDWARDS BLVD	--	1
PB19	109+85.71	9.57' LT	EDWARDS BLVD	--	1
PB20	109+85.44	45.72' LT	EDWARDS BLVD	--	1
PB21	109+77.37	76.26' LT	EDWARDS BLVD	--	1
TOTAL 0010				7	14

BASE NO.	STATION	OFFSET	LOCATION	654.0101	654.0102	654.0110	654.0120	654.0217
				CONCRETE	CONCRETE	CONCRETE	CONCRETE	CONCRETE
				BASES TYPE 1	BASES TYPE 2	BASES TYPE 10	BASES TYPE 10-SPECIAL	BASES TYPE 9-SPECIAL
				EACH	EACH	EACH	EACH	EACH
SB1	203+72.65	36.11' RT	BLOOMFIELD RD	1	--	--	--	--
SB2	203+78.74	35.26' LT	BLOOMFIELD RD	--	--	--	1	--
SB3	111+36.73	50.92' LT	EDWARDS BLVD	--	1	--	--	--
SB4	113+07.64	12.05' LT	EDWARDS BLVD	1	--	--	--	--
SB5	111+48.23	55.82' RT	EDWARDS BLVD	--	--	--	1	--
SB6	111+32.04	65.85' RT	EDWARDS BLVD	1	--	--	--	--
SB7	205+52.13	32.39' LT	BLOOMFIELD RD	1	--	--	--	--
SB8	205+24.35	39.70' RT	BLOOMFIELD RD	--	--	--	1	--
SB9	109+90.81	47.92' RT	EDWARDS BLVD	1	--	--	--	--
SB10	109+90.98	11.98' RT	EDWARDS BLVD	1	--	--	--	--
SB11	109+91.28	49.76' LT	EDWARDS BLVD	--	--	1	--	--
CB1	203+58.65	86.801' RT	BLOOMFIELD RD	--	--	--	--	1
TOTAL 0010				6	1	1	3	1

		655.0320	655.0610
		CABLE TYPE UF 2- 10 AWG GROUNDED	ELECTRICAL WIRE LIGHTING 12 AWG
FROM	TO	LF	LF
CB1	SB2	209	--
SB2	LUMIN (1)	--	144
SB2	SB3	151	--
SB3	LUMIN (1)	--	117
SB3	SB12	360	--
SB12	LUMIN (1)	--	117
CB1	SB8	403	--
SB8	LUMIN (1)	--	144
SB8	SB5	256	--
SB5	LUMIN (1)	--	144
CB1	SB13	161	--
SB13	LUMIN (2)	--	234
SB13	SB14	191	--
SB13	LUMIN (1)	--	117
TOTAL 0010		1,731	1,017

	657.0609	659.1125	SPV.0060.09
	LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT	LUMINAIRE S UTILITY LED C	SPECIAL (TRANSPORT & INSTALL LUMINAIRE ARMS STEEL 15-FT)
LOCATION	EACH	EACH	EACH
SB2	--	1	1
SB3	1	1	--
SB5	--	1	1
SB8	--	1	1
SB12	--	1	--
SB13	--	2	--
SB14	--	1	--
TOTAL 0010	1	8	3

655.0515		
ELECTRICAL WIRE		
TRAFFIC SIGNALS 10		
AWG		
STATION	TO	LF
CB1	SB1	130
SB1	SB2	143
SB2	SB3	140
SB3	SB4	107
SB4	SB5	187
SB5	SB6	73
SB6	SB7	125
SB7	SB8	176
SB8	SB9	201
SB9	SB10	85
SB10	SB11	127
SB11	CB1	95
PB1	CB1	34
PB2	SB1	58
PB4	SB2	60
PB5	SB3	51
PB8	SB4	30
PB9	SB4	67
PB10	SB5	120
PB11	SB7	93
PB14	SB8	117
PB15	SB9	58
PB18	SB10	58
PB19	SB10	64
PB20	SB11	108
PB21	CB1	100
TOTAL 0010		2,607

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

REVISIONS:

[illegible]

NORTH ARROW:



SCALE: // // // // // X' = XX'



X XX XX

SEAL:

all in

SHEET:

MISCELLANEOUS
QUANTITIES

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

52

MONOTUBE, STANDARDS, PUSHBUTTON

	657.0100	657.0255	657.0310	657.0420	657.0425	SPV.0060.03	SPV.0060.05	SPV.0060.06	SPV.0060.07	SPV.0060.08	SPV.0060.11
		TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT		TRAFFIC SIGNAL STANDARDS ALUMINUM 13- FT	TRAFFIC SIGNAL STANDARDS ALUMINUM 15- FT	SPECIAL (TRANSPORT AND INSTALL POLES TYPE 9)	SPECIAL (TRANSPORT AND INSTALL POLES TYPE 10 SPECIAL)	SPECIAL (TRANSPORT AND INSTALL MONOTUBE ARMS 30-FT)	SPECIAL (TRANSPORT AND INSTALL MONOTUBE ARMS 40-FT)	SPECIAL (TRANSPORT AND INSTALL MONOTUBE ARMS 45-FT)	SPECIAL (TRANSPORT AND INSTALL MONOTUBE ARMS 35-FT)
SIGNAL BASE NO.	PEDESTAL BASES EACH	CIRCLE EACH	POLES TYPE 3 EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
SB1	1	--	--	--	1	--	--	--	--	--	--
SB2	--	--	--	--	--	--	1	--	1	--	--
SB3	--	1	1	--	--	--	--	--	--	--	--
SB4	1	--	--	--	1	--	--	--	--	--	--
SB5	--	--	--	--	--	--	1	--	--	--	1
SB6	1	--	--	--	1	--	--	--	--	--	--
SB7	1	--	--	1	--	--	--	--	--	--	--
SB8	--	--	--	--	--	--	1	--	--	1	--
SB9	1	--	--	--	1	--	--	--	--	--	--
SB10	1	--	--	--	1	--	--	--	--	--	--
SB11	--	--	--	--	--	1	--	1	--	--	--
TOTAL 0010	6	1	1	1	5	1	3	1	1	1	1

SIGNAL AND PED FACES

RADAR

	SPV.0105.02
	SPECIAL (TRANSPORT
	AND INSTALL STATE
	FURNISHED RADAR
	DETECTION SYSTEM [STH
	120 & BLOOMFIELD])
LOCATION	LS
STH 120 & BLOOMFIELD	1
TOTAL 0010	1

EVP

	SPV.0105.01
	SPECIAL (TRANSPORT AND INSTALL STATE FURNISHED EVP DETECTOR HEADS WITH CONFIRMATION BEACONS [STH 120 & BLOOMFIELD])
LOCATION	LS
STH 120 & BLOOMFIELD	1
TOTAL 0010	1

		658.0173	658.0174	658.0416
		TRAFFIC	TRAFFIC	PEDESTRIAN
		SIGNAL FACE	SIGNAL FACE	SIGNAL FACE
		3S 12-INCH	4S 12-INCH	16-INCH
SIGNAL HEAD NO	SIGNAL BASE NO.	EACH	EACH	EACH
1	SB9	1	--	--
2	SB5	1	--	--
3	SB5	1	--	--
4	SB3	--	1	--
5	SB4	--	1	--
6	SB3	1	--	--
7	SB11	1	--	--
8	SB11	1	--	--
9	SB9	--	1	--
10	SB10	--	1	--
11	SB7	1	--	--
12	SB2	1	--	--
13	SB2	1	--	--
14	SB1	--	1	--
15	SB2	--	1	--
16	SB1	1	--	--
17	SB8	1	--	--
18	SB8	1	--	--
19	SB6	--	1	--
20	SB8	--	1	--
21	SB1	--	--	1
22	SB2	--	--	1
TOTAL 0010		12	8	2

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CITY OF LAKE GENÈVE
WISCONSIN

RELEASE:
BID SET

[illegible]

NORTH ARROW:



SCALE: $X^* = XX'$

[illegible]

all in

SHEET: MISCELLANEOUS QUANTITIES

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER: _____

53

SAWING

					690.0150	690.0250	
					SAWING	SAWING	
					ASPHALT	CONCRETE	
STATION	TO	STATION	OFFSET	LOCATION	LF	LF	REMARKS
200+43.83	-	203+69.88	RT	BLOOMFIELD RD	315	103	
200+50.99	-	203+43.33	LT	BLOOMFIELD RD	286	--	
203+43.33	-	204+25.99	LT	BLOOMFIELD RD	--	157	INTERSECTION NW
204+87.95	-	205+71.67	RT	BLOOMFIELD RD	--	122	INTERSECTION SE
205+71.67	-	209+95.35	RT	BLOOMFIELD RD	434	--	
205+47.70	-	209+93.10	LT	BLOOMFIELD RD	471	79	
	-		LT	EDWARDS BLVD	25	--	NORTH SIDEWALK
	-		LT	EDWARDS BLVD	18	51	SOUTH SIDEWALK
106+09.36	-	106+24.36	RT	EDWARDS BLVD	--	79	Loops 61 & 62
107+65.84	-	107+80.88	RT	EDWARDS BLVD	--	80	Loops 63 & 64
109+46.82	-	109+96.21	RT	EDWARDS BLVD	--	123	Loops 11 & 12
111+29.41	-	111+78.54	LT	EDWARDS BLVD	--	121	Loops 51 & 52
113+51.00	-	113+66.17	LT	EDWARDS BLVD	--	79	Loops 23 & 24
115+06.54	-	115+21.64	LT	EDWARDS BLVD	--	80	Loops 21 & 22
TOTAL 0010					1,549	1,074	

ADJUSTMENTS

			SPV.0060.51	SPV.0060.52
			SPECIAL (ADJUSTING SANITARY MANHOLE)	SPECIAL (ADJUSTING WATER VALVE BOXES)
STATION	OFFSET	LOCATION	EACH	EACH
205+04	41.2' RT	BLOOMFIELD RD	1	--
201+85	20.5' RT	BLOOMFIELD RD	--	1
206+44	23.8' RT	BLOOMFIELD RD	--	1
TOTAL 0010			1	2

CURB RAMP GRADING

<u>PAVEMENT CLEANUP PROJECT</u>	
	SPV.0075.01
	SPECIAL (PAVEMENT CLEANUP PROJECT)
LOCATION	HRS
STH 120 & BLOOMFIELD	16
TOTAL 0010	16

		SPV.0060.01 SPECIAL (CURB RAMP GRADING, SHAPING, AND FINISHING)
STATION	LOCATION	EACH
203+74.85	LT	1
203+74.85	RT	1
TOTAL 0010		2

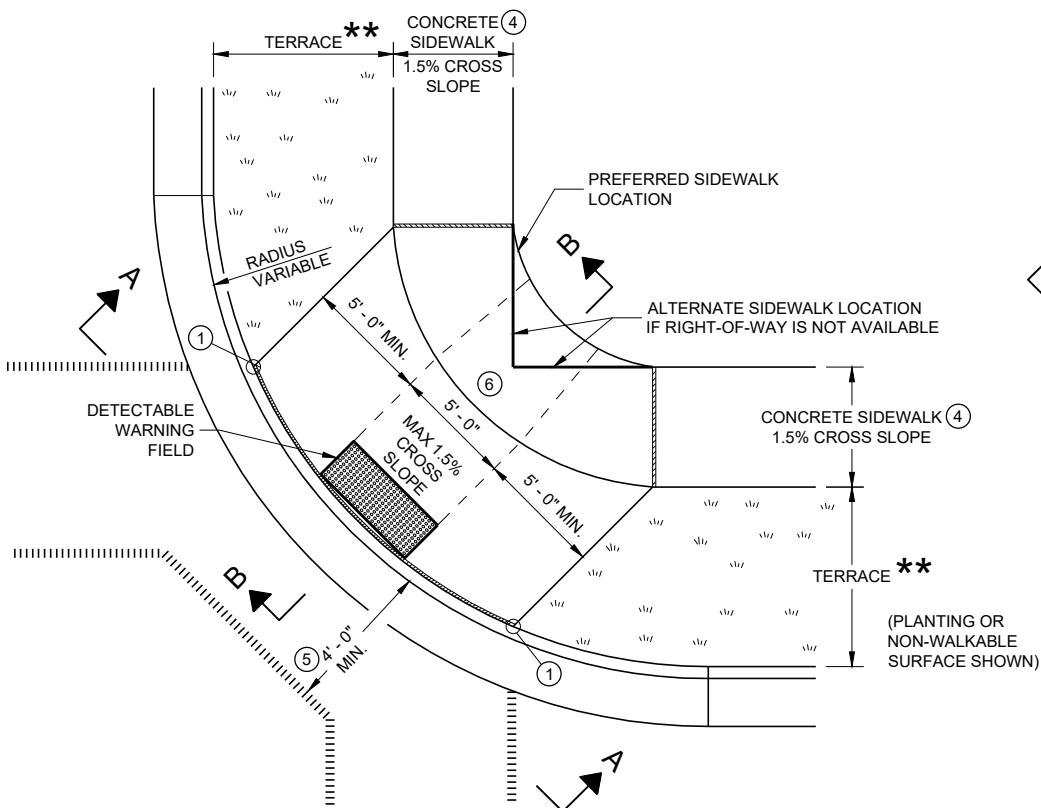
SIGNAL CABINET

SPV.0105.04		
SPECIAL (TRANSPORT AND		
INSTALL STATE		
FURNISHED TRAFFIC		
SIGNAL CABINET [STH 120		
& BLOOMFIELD])		
STATION	LOCATION	LS
203+58.65	BLOOMFIELD RD	1
TOTAL 0010		1

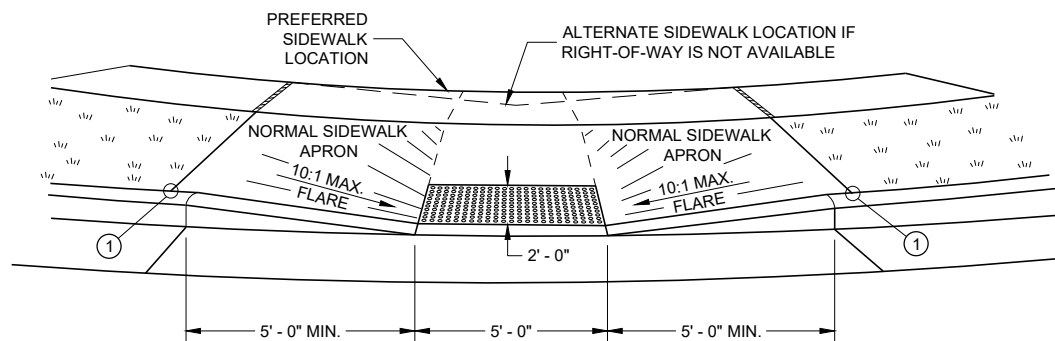
AUDIBLE PEDESTRIAN SYSTEM

	SPV.0105.05
	SPECIAL (TRANSPORT AND INSTALL STATE FURNISHED AUDIBLE PEDESTRIAN SIGNAL SYSTEM [STH 120 & BLOOMFIELD])
LOCATION	LS
STH 120 AND BLOOMFIELD	1
TOTAL 0010	1

ALL ITEMS CATEGORY 0010
UNLESS OTHERWISE NOTED

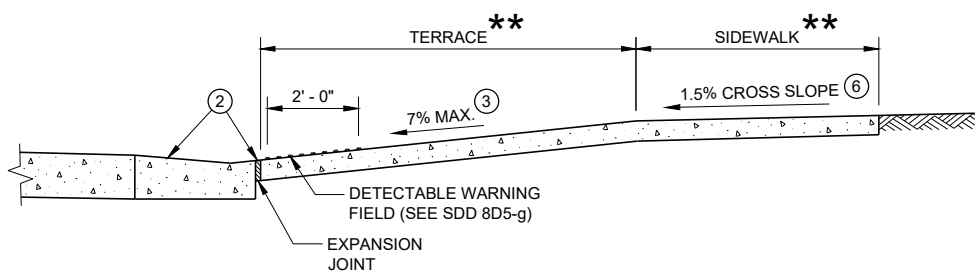


PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)

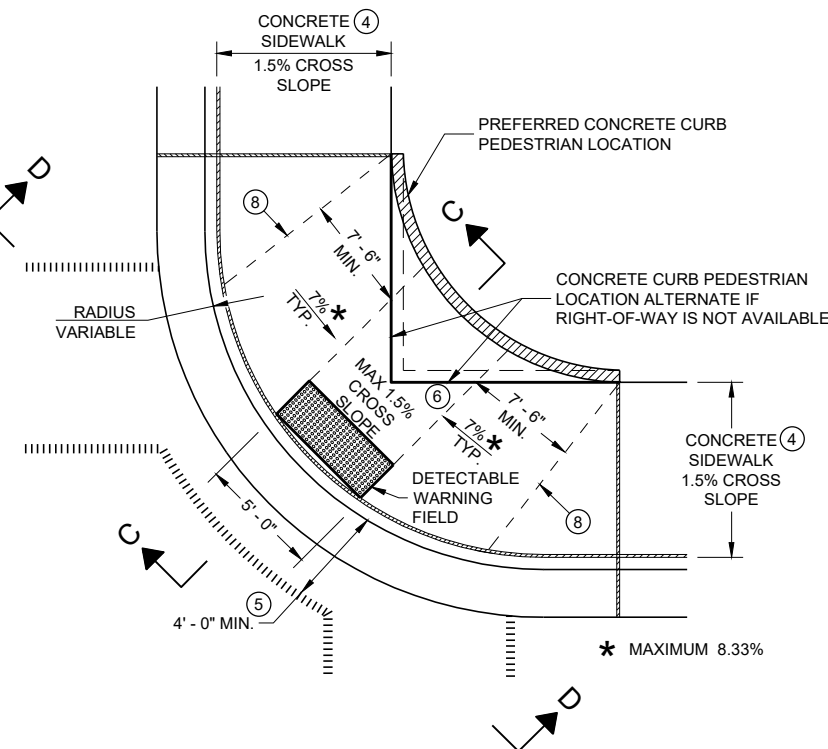


VIEW A - A FOR TYPE 1

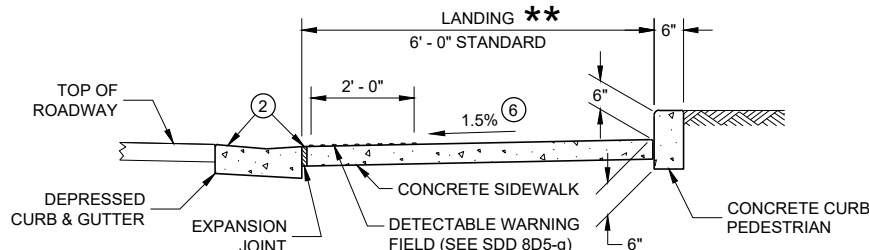
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



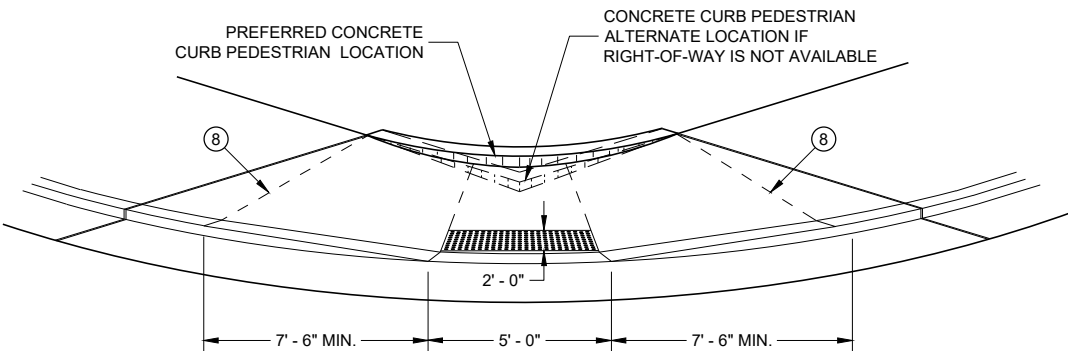
SECTION B - B FOR TYPE 1



PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMP SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

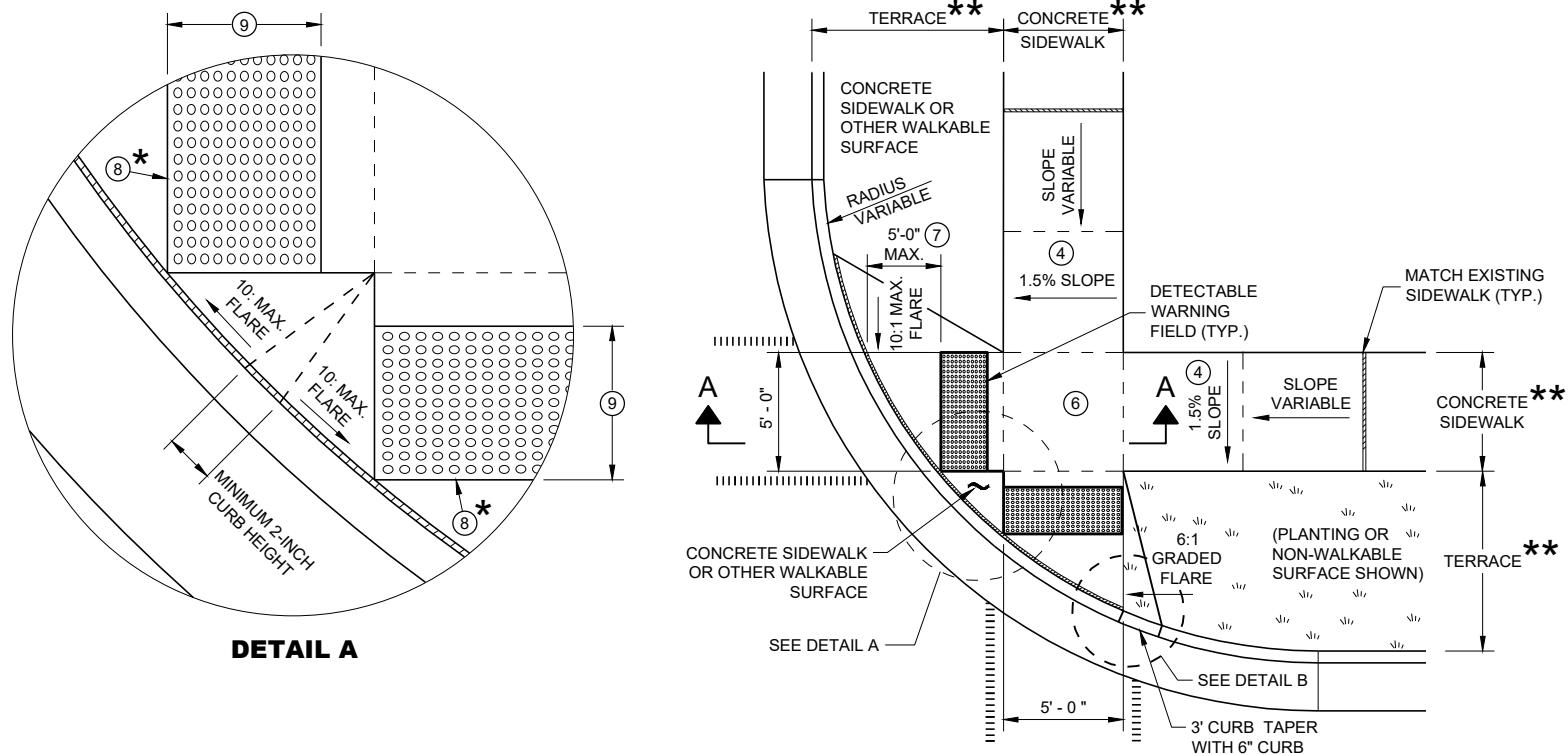
SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

- THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

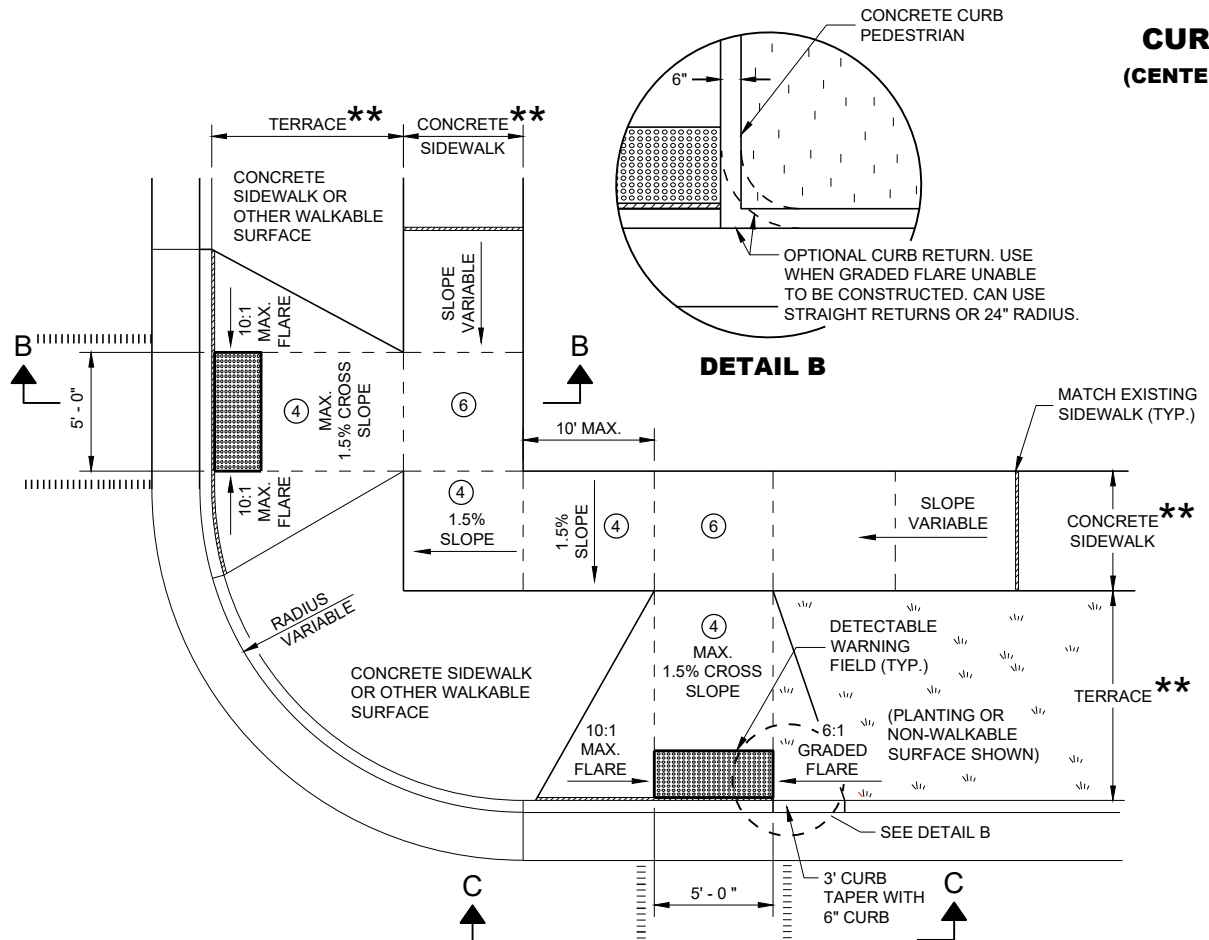
LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 1 AND 1-A



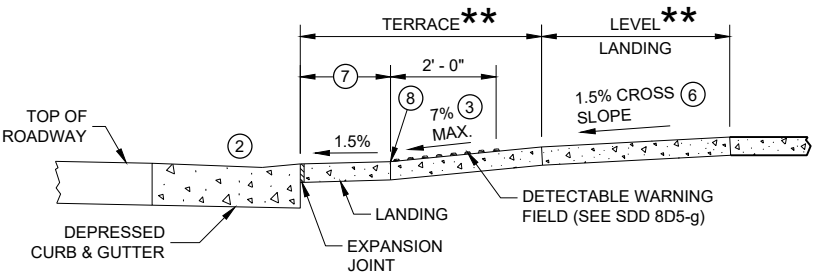
**PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)**



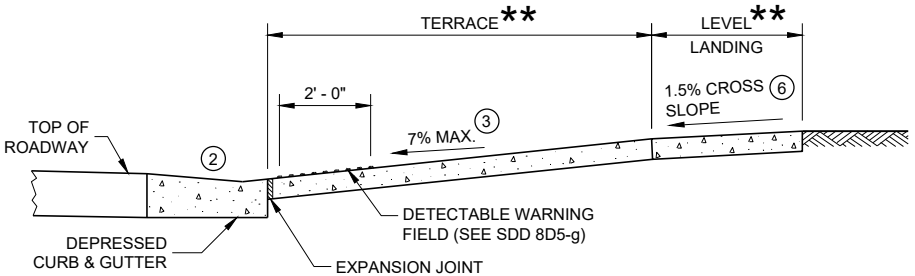
**PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)**

GENERAL NOTES

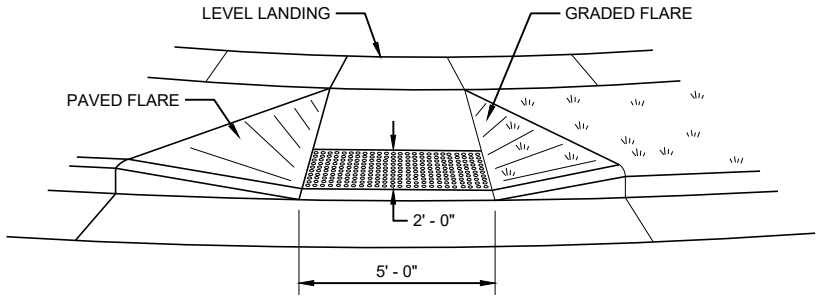
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/2 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
 - AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
 - ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
 - WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
 - PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



SECTION A - A FOR TYPE 2



SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

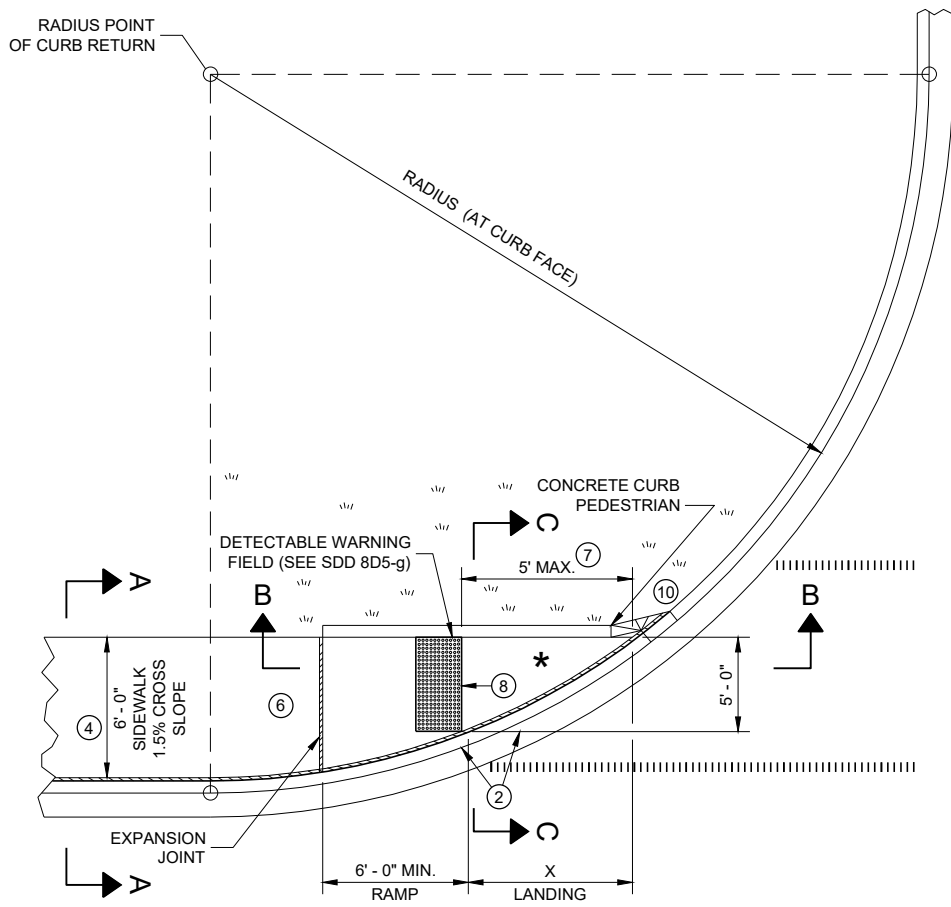
** WIDTH SHOWN ELSEWHERE IN THE PLANS

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 2 AND 3

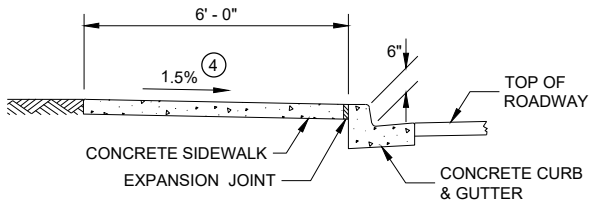
SDD 08D05-c Curb Ramps Types 4A and 4A1



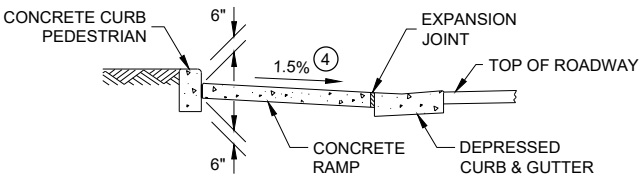
**PLAN VIEW
CURB RAMP TYPE 4A**

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED

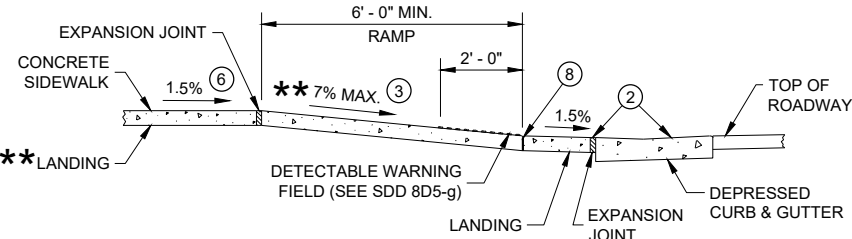


SECTION A - A FOR TYPE 4A



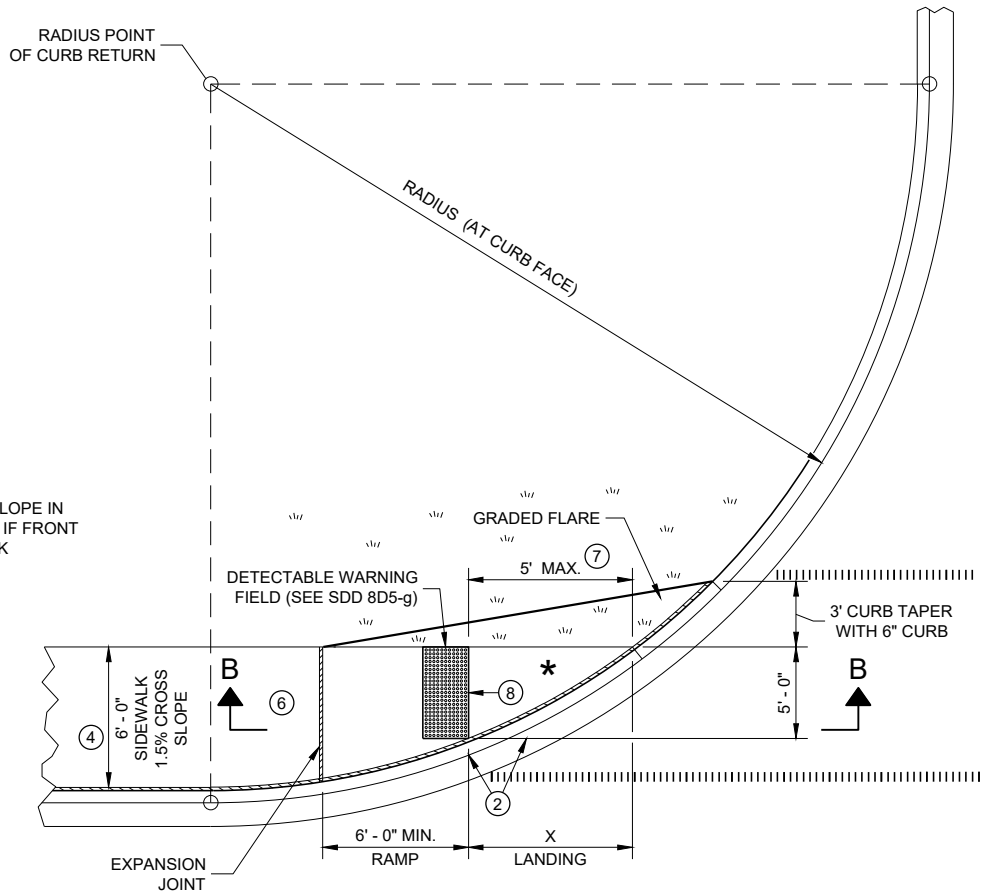
SECTION C - C FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

**SECTION B - B FOR
TYPE 4A AND TYPE 4A1**



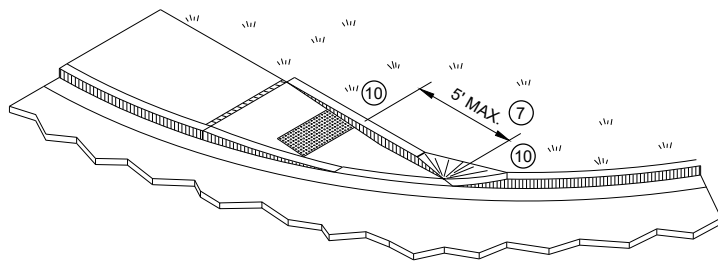
**PLAN VIEW
CURB RAMP TYPE 4A1**

GENERAL NOTES

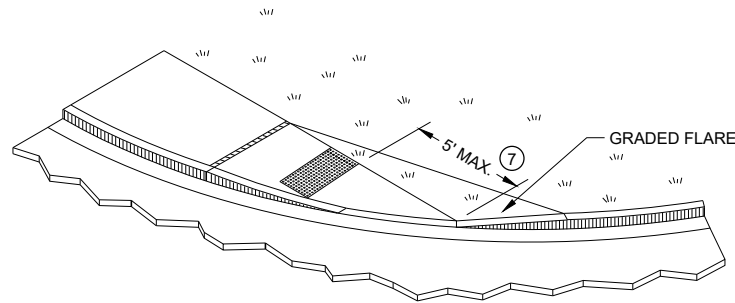
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



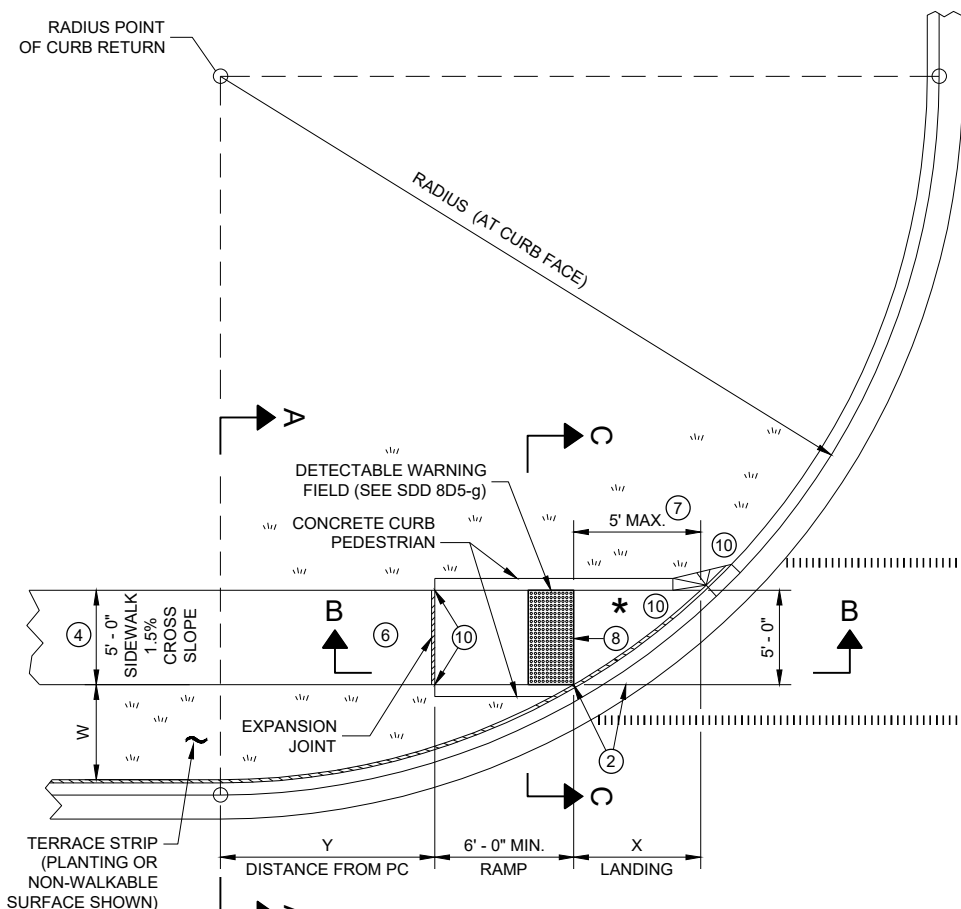
ISOMETRIC VIEW FOR TYPE 4A



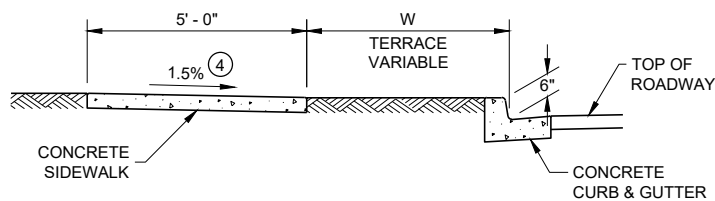
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS TYPE 4A AND 4A1

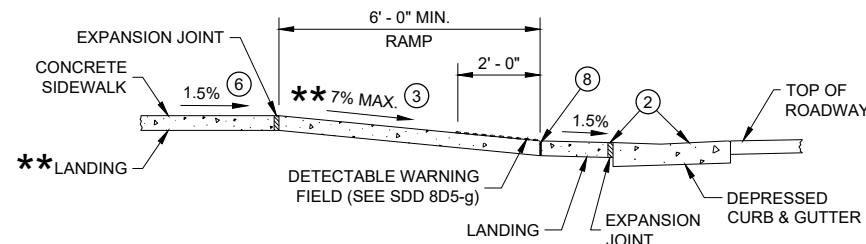
SDD 08D05-d: Curb Ramps Types 4B and 4B1



PLAN VIEW
CURB RAMP TYPE 4B



SECTION A - A FOR TYPE 4B



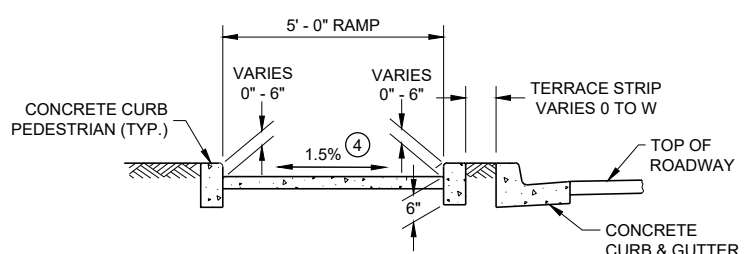
SECTION B - B FOR
TYPE 4B AND TYPE 4B1

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

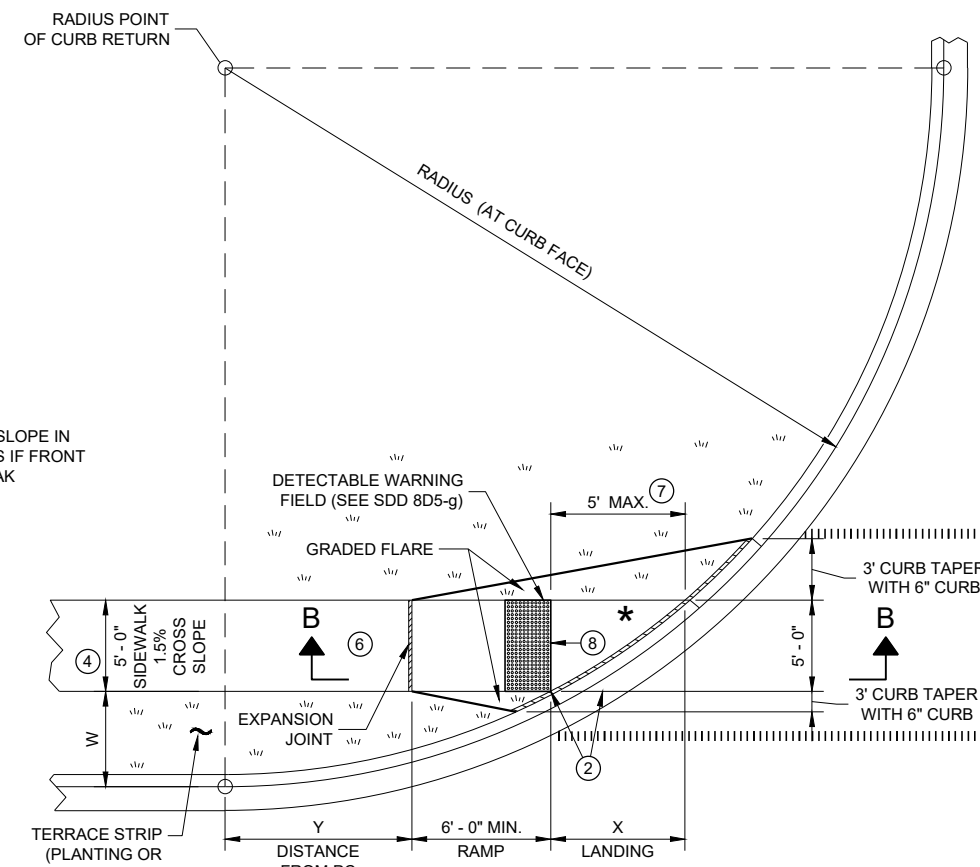
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 3/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/2"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

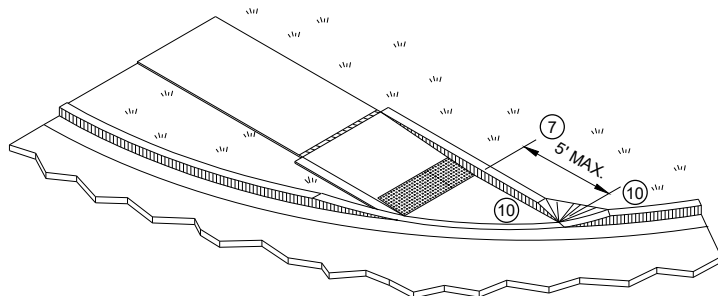
INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



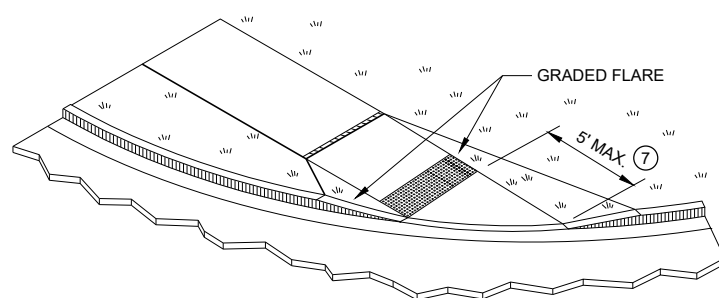
SECTION C - C FOR TYPE 4B



PLAN VIEW
CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

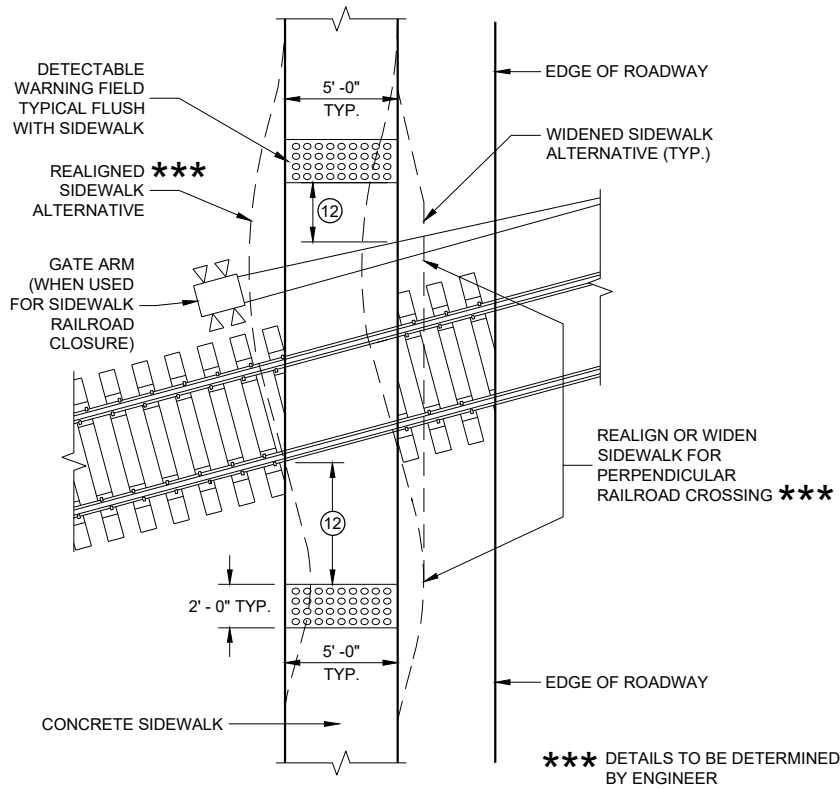
- LEGEND**
- 1/2" EXPANSION JOINT SIDEWALK
 - CONTRACTION JOINT SIDEWALK
 - PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

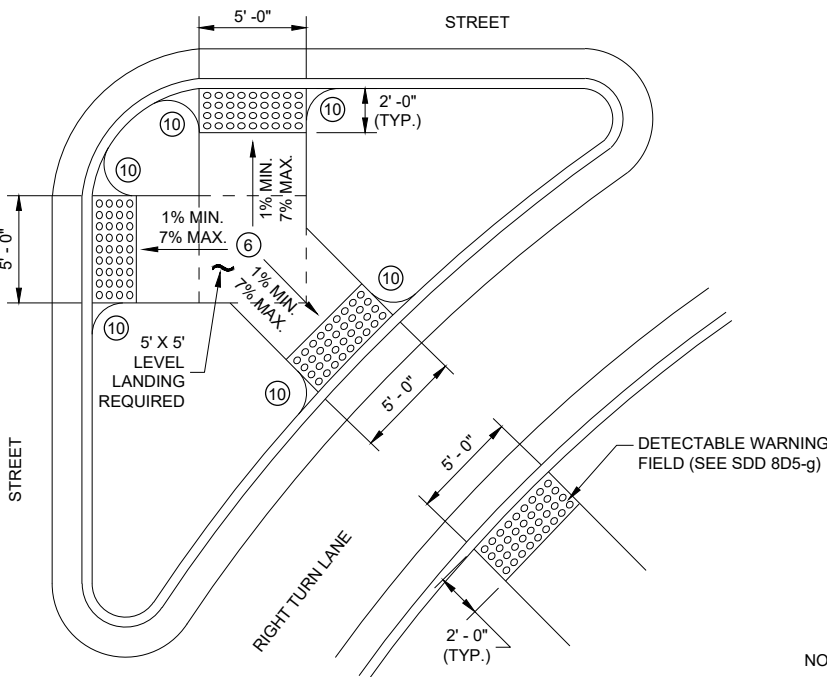
CURB RAMPS
TYPE 4B AND 4B1

SDD 08D05-e: Curb Ramps Types 5, 6, 7A, 7B and 8



CURB RAMP TYPE 8

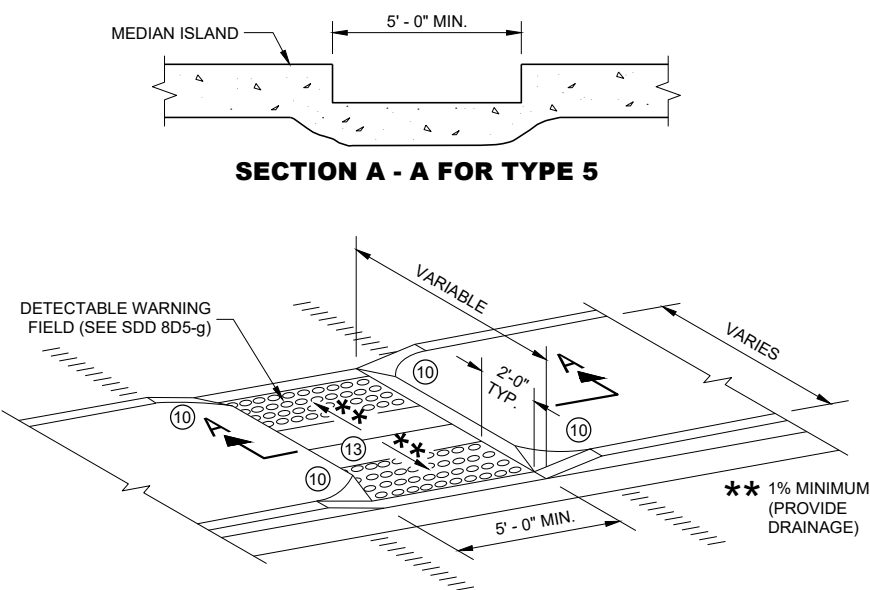
DETECTABLE WARNINGS AT RAILROAD CROSSING



CURB RAMP TYPE 6

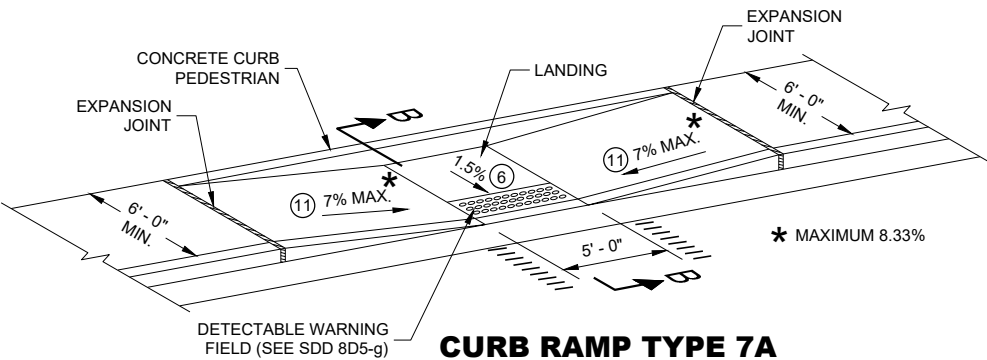
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



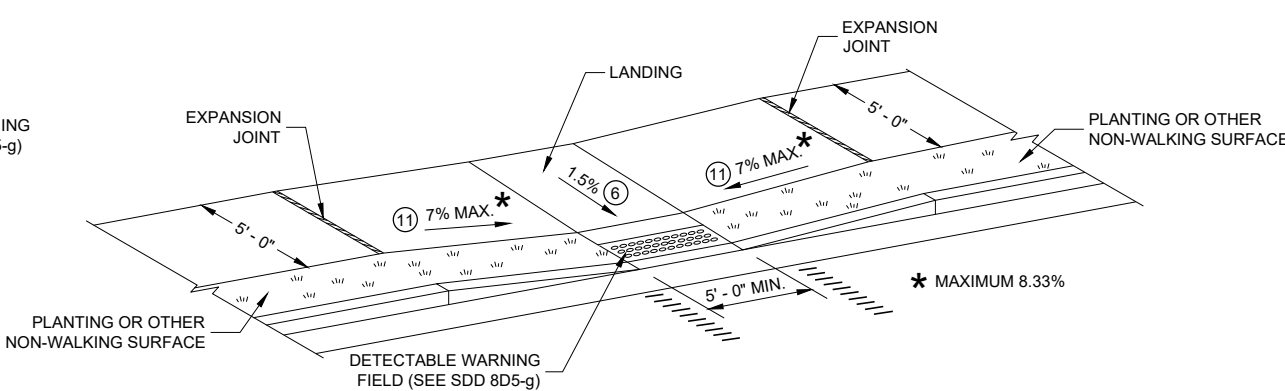
CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING



CURB RAMP TYPE 7A

MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

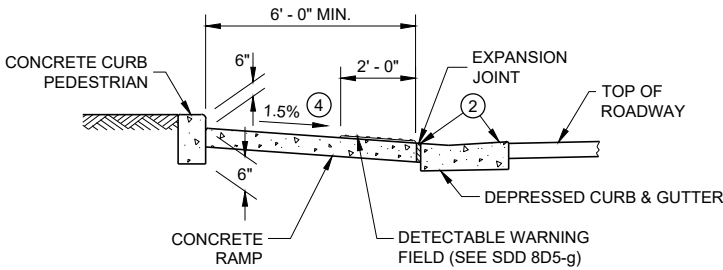
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- (11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- (12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- (13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



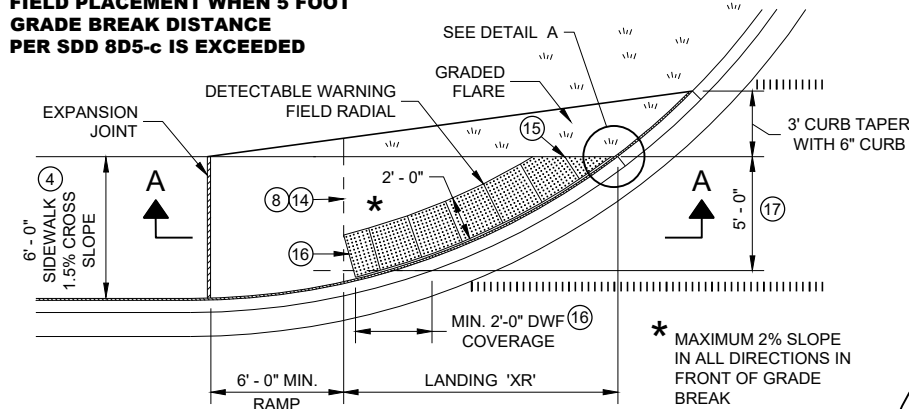
SECTION B - B FOR TYPE 7A

CURB RAMPS TYPE 5, 6, 7A, 7B & 8

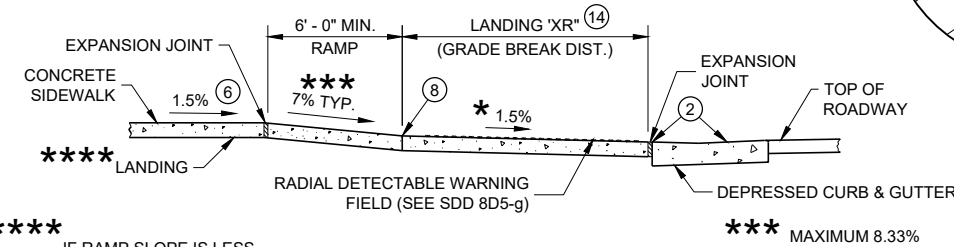
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05-f Curb Ramps Radial Detectable Warning Field Applications

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED

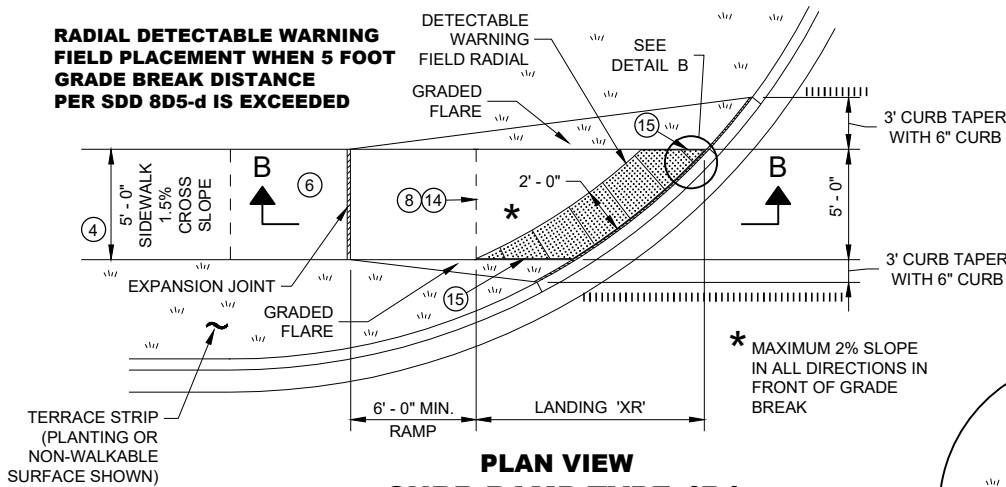


**PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

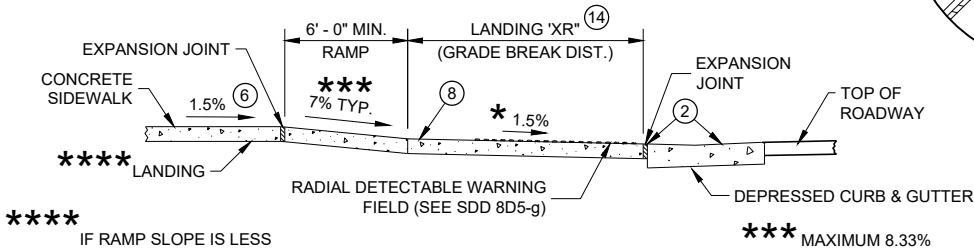


SECTION A - A FOR TYPE 4A1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



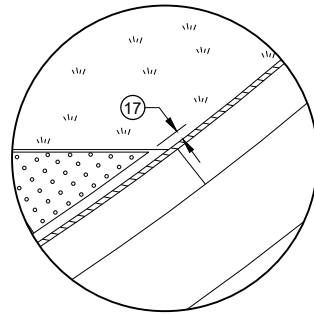
**PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



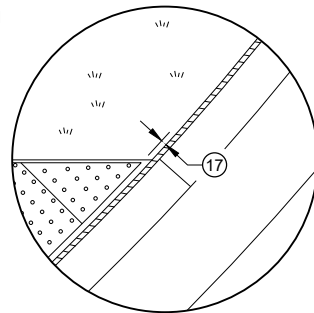
SECTION B - B FOR TYPE 4B1

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



DETAIL A

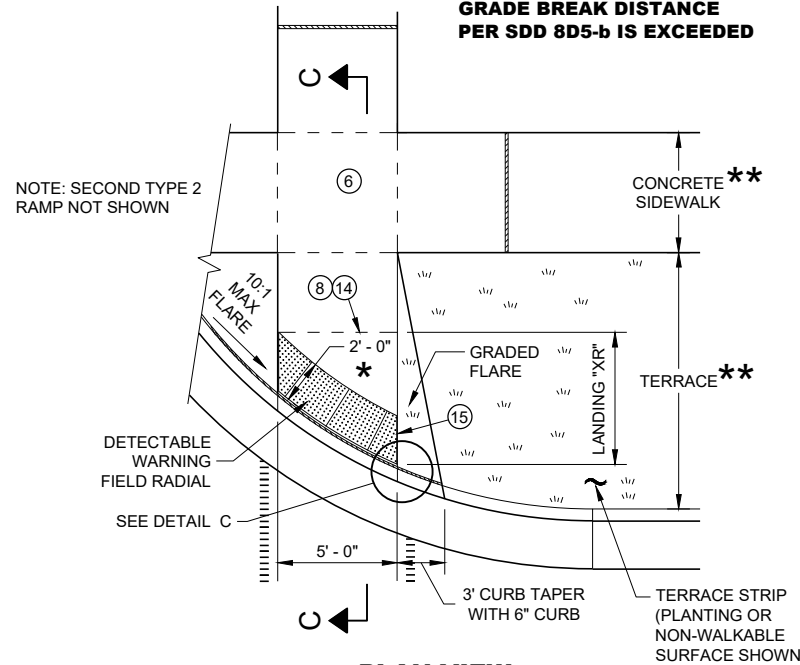


DETAIL B

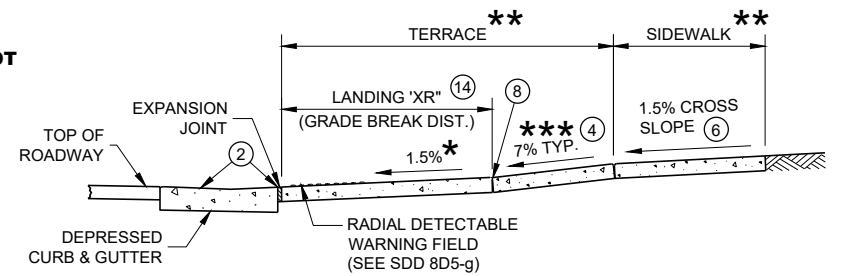
GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMP AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMP. TYPE 4A AND 4B CURB RAMP ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

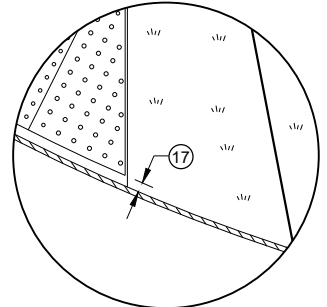


**PLAN VIEW
CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)**



SECTION C - C FOR TYPE 2

- * MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ** WIDTH SHOWN ELSEWHERE IN THE PLANS
- *** MAXIMUM 8.33%

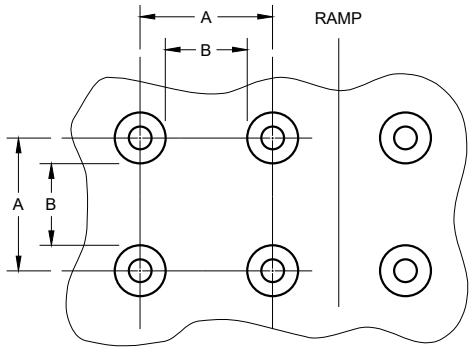


DETAIL C

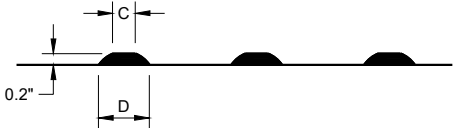
SDD 08D05-g: Curb Ramps Rectangular and Radial Detectable Warning Plates

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

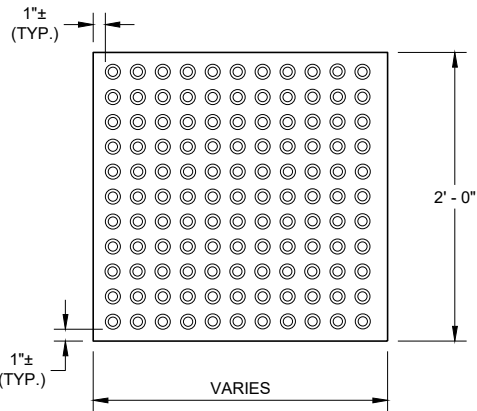


PLAN VIEW

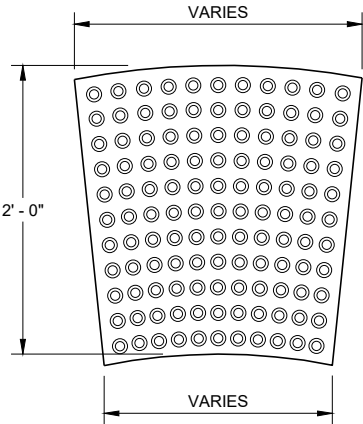


ELEVATION VIEW

TRUNCATED DOMES DETECTABLE WARNING PATTERN DETAIL

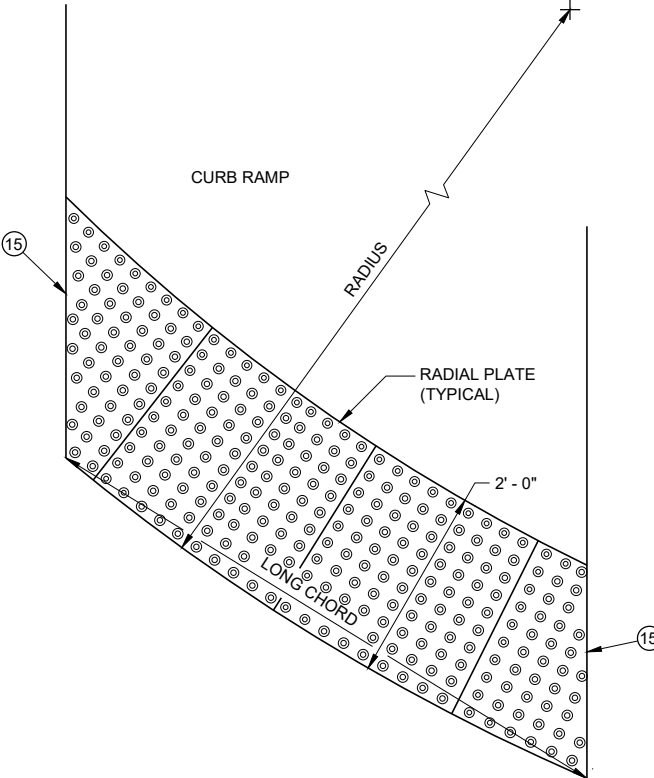


RECTANGULAR
PLATES



RADIAL
PLATES

PLAN VIEW DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW RADIAL DETECTABLE WARNING FIELD ATTRIBUTES

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

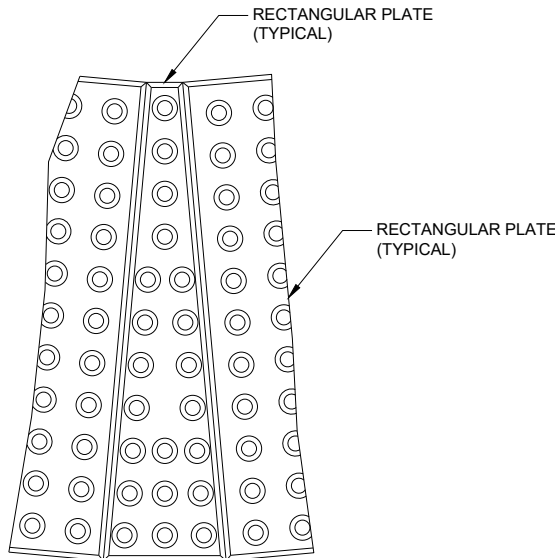
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



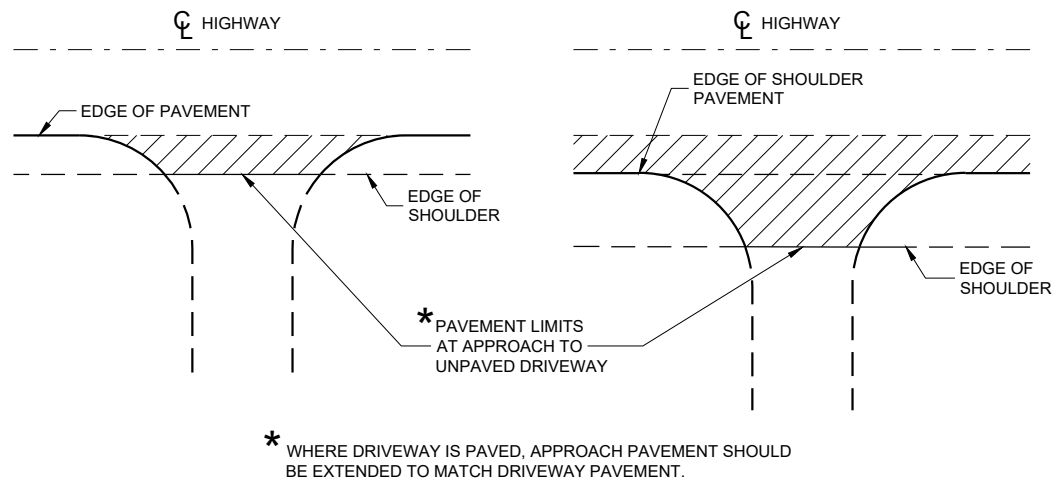
PLAN VIEW RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMP RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

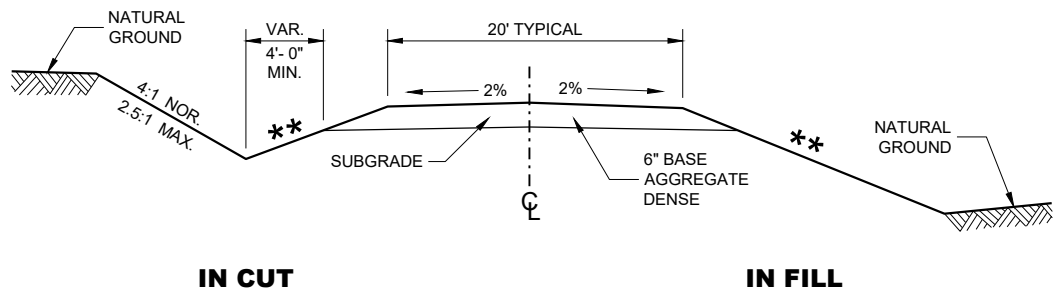
60



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

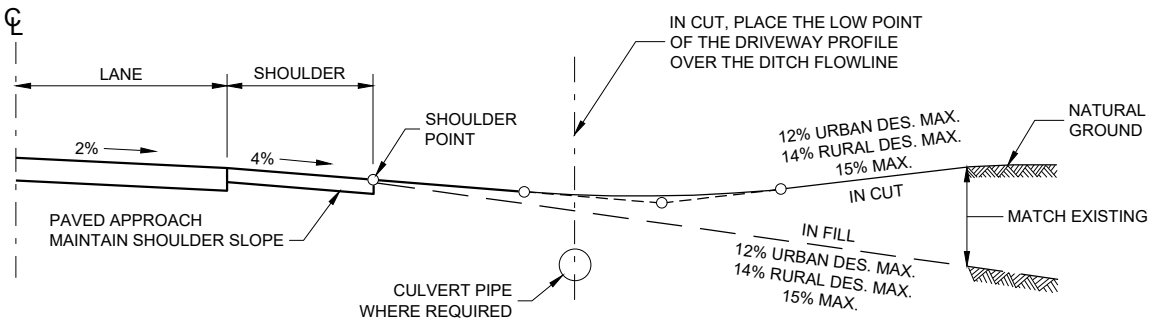
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



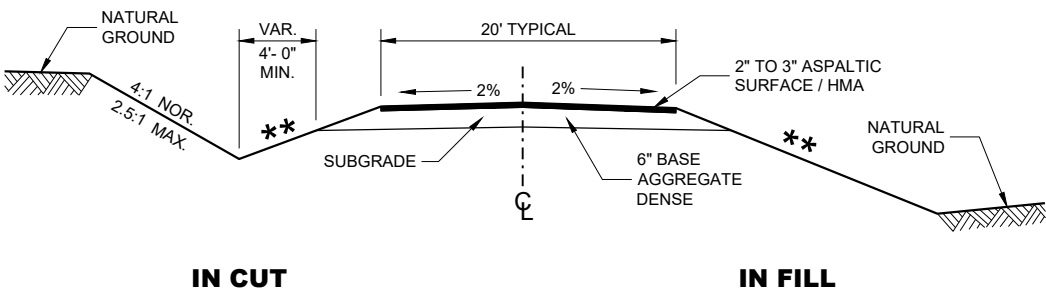
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

****** SLOPE CAN VARY WITH
SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



TYPICAL DRIVEWAY PROFILES



**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

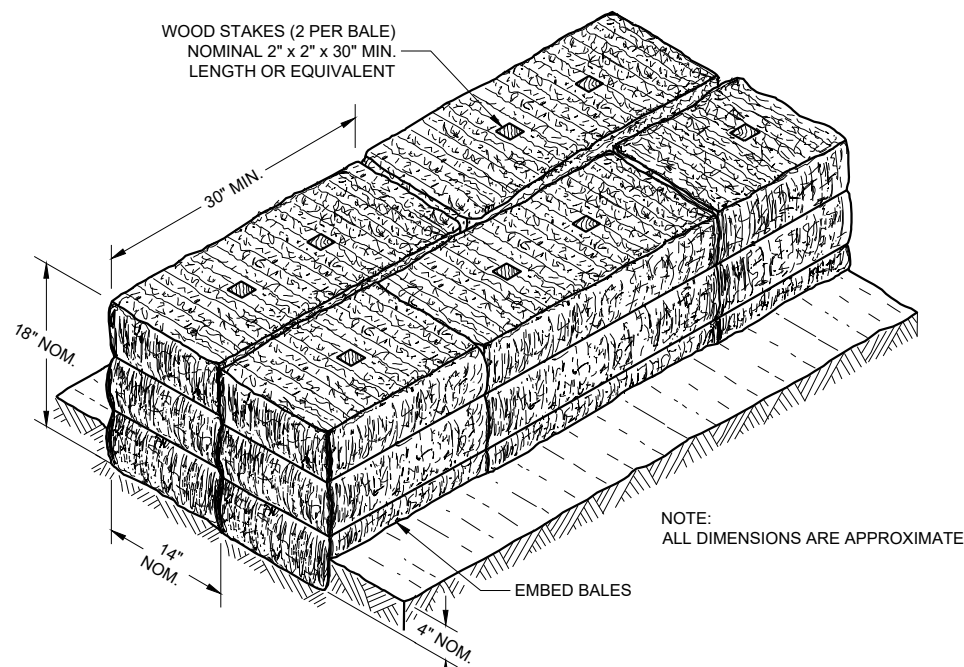
**DRIVEWAYS WITHOUT
CURB AND GUTTER**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

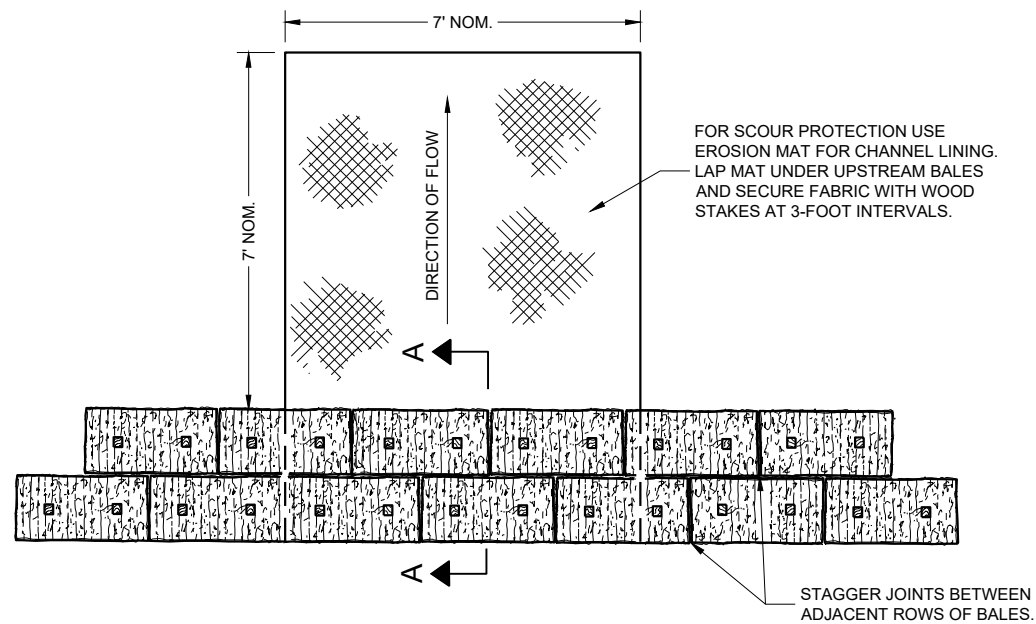
APPROVED
December 2017
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR



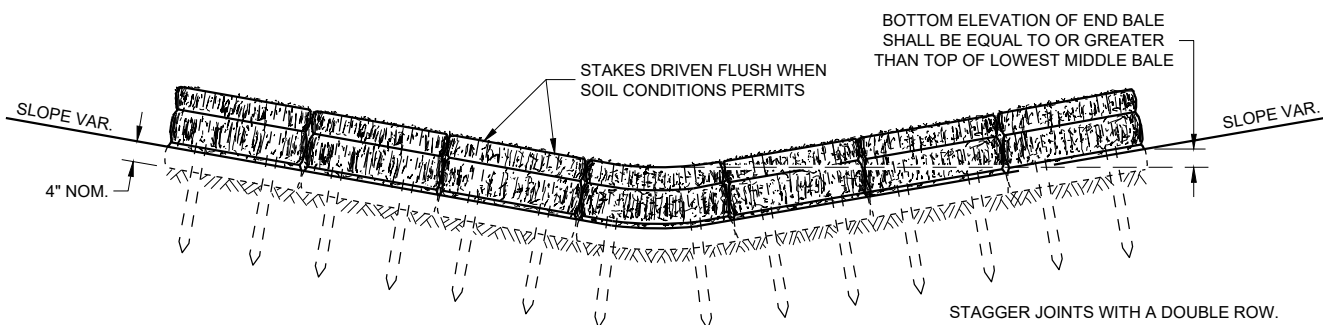
SDD 08E08 Typical Installations of Erosion Bales / Temporary Ditch Checks



SECTION A - A



PLAN VIEW



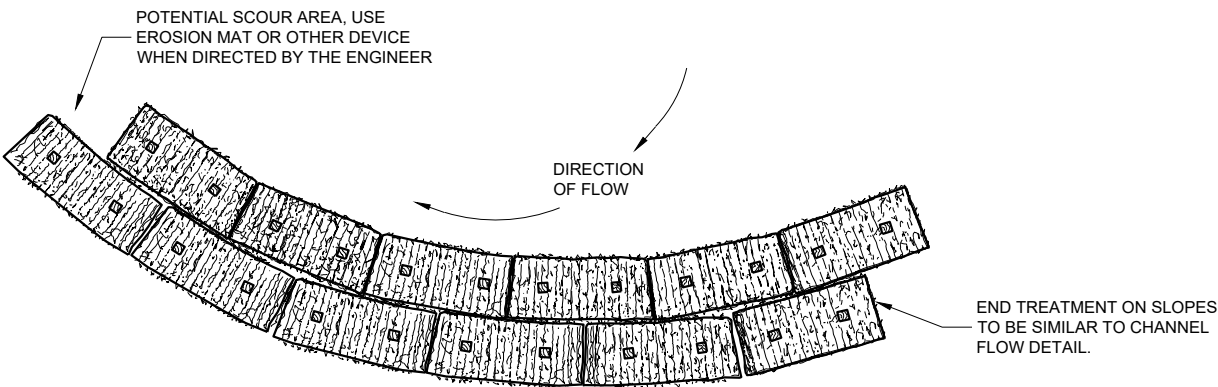
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES^①

GENERAL NOTES

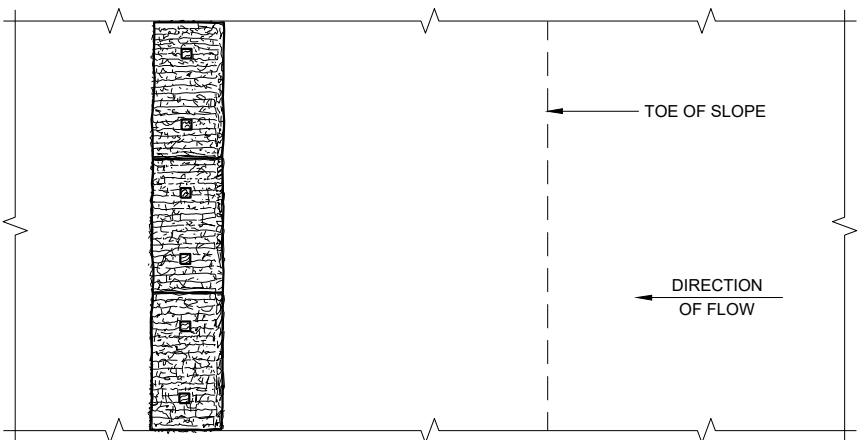
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS, EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

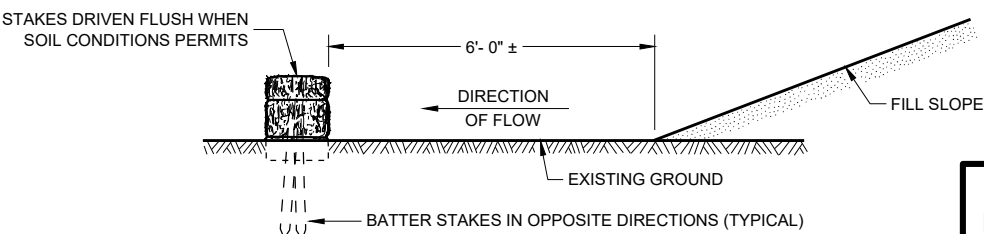


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN ELEVATION



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES/TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

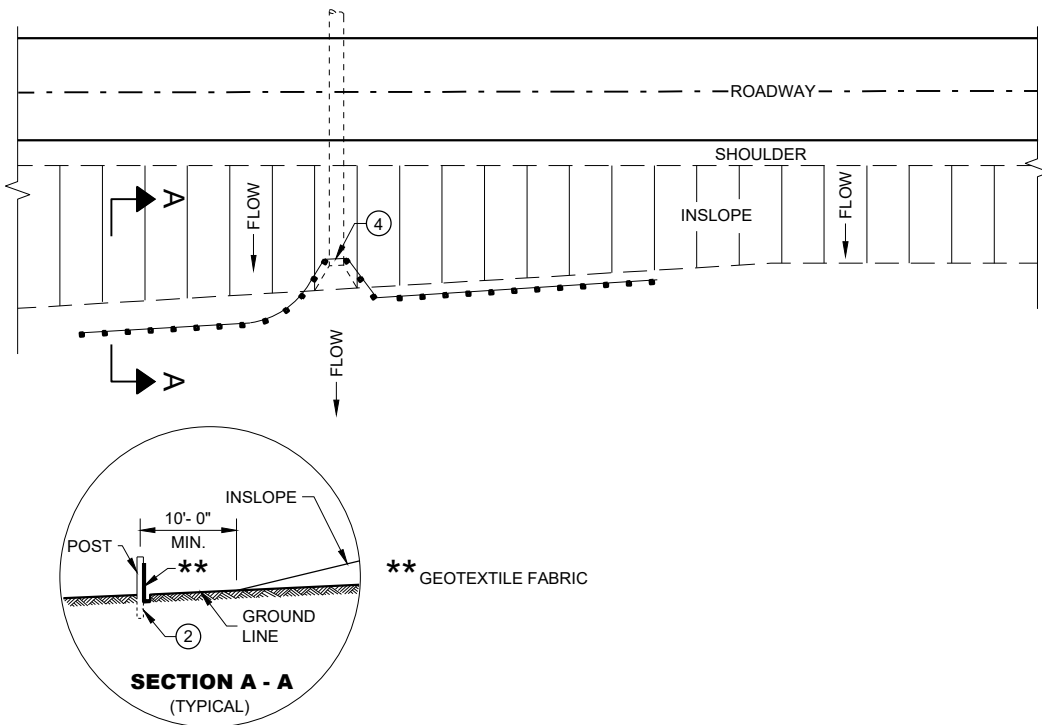
6/4/02

DATE

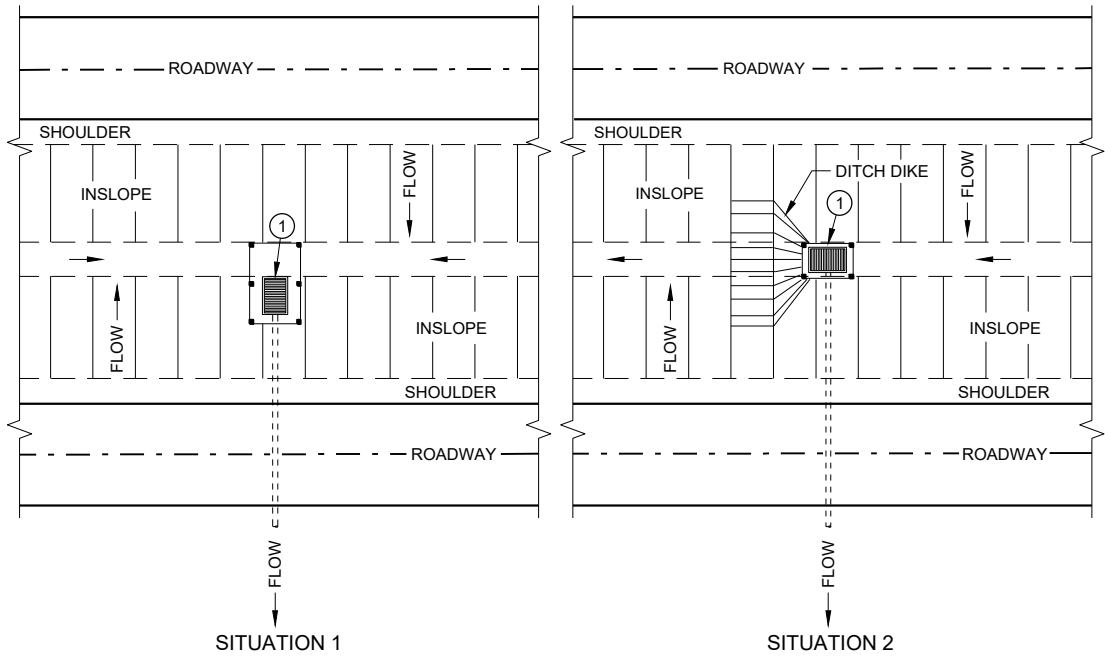
FHWA

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT
ENGINEER

62



**PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE**

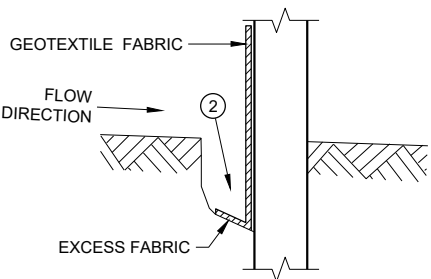


**PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS**

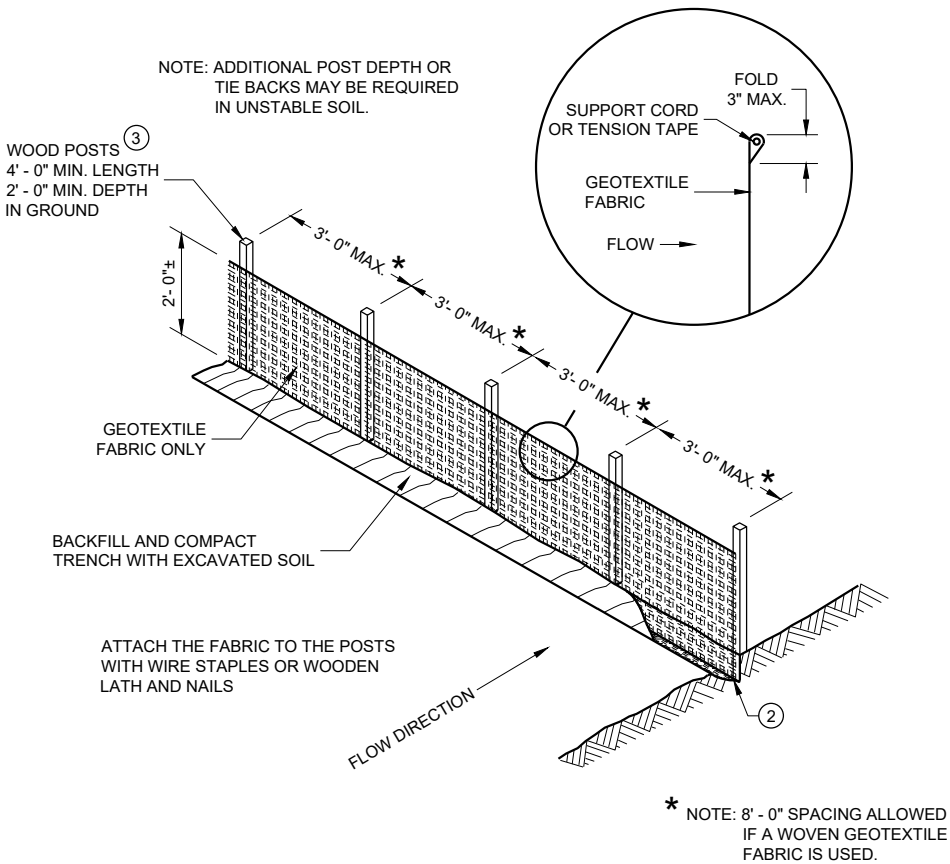
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

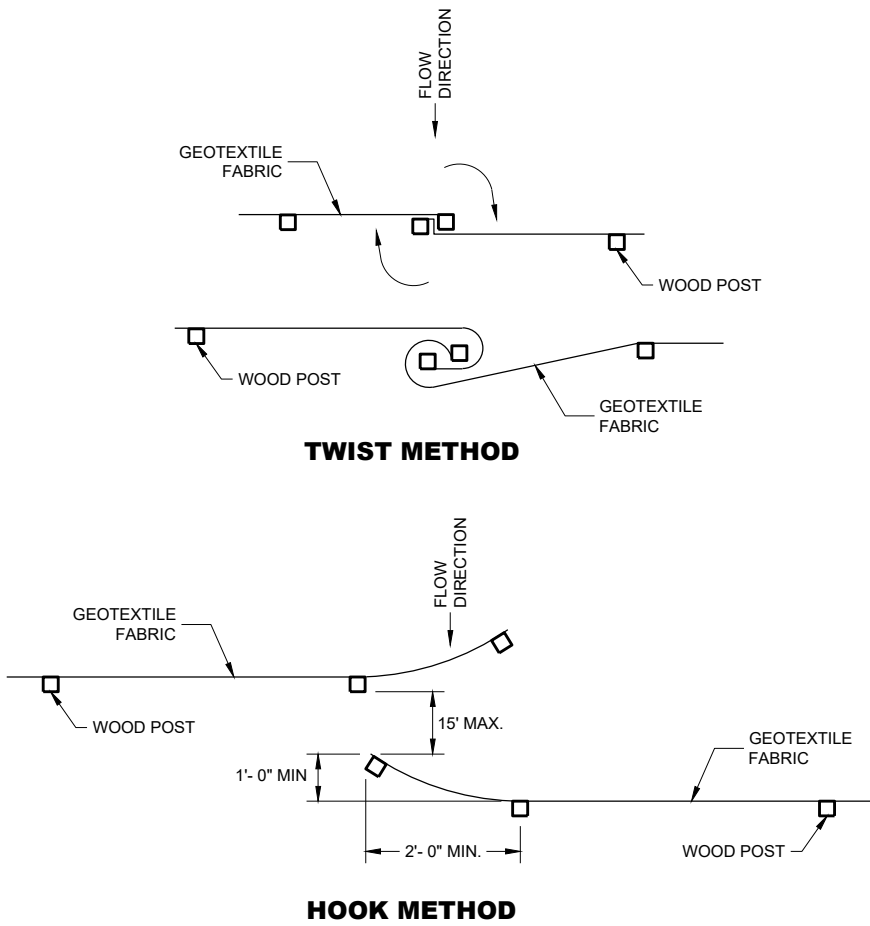
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE AND 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS: A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



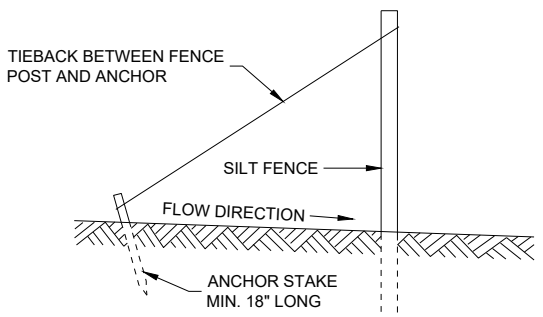
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤



**SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)**

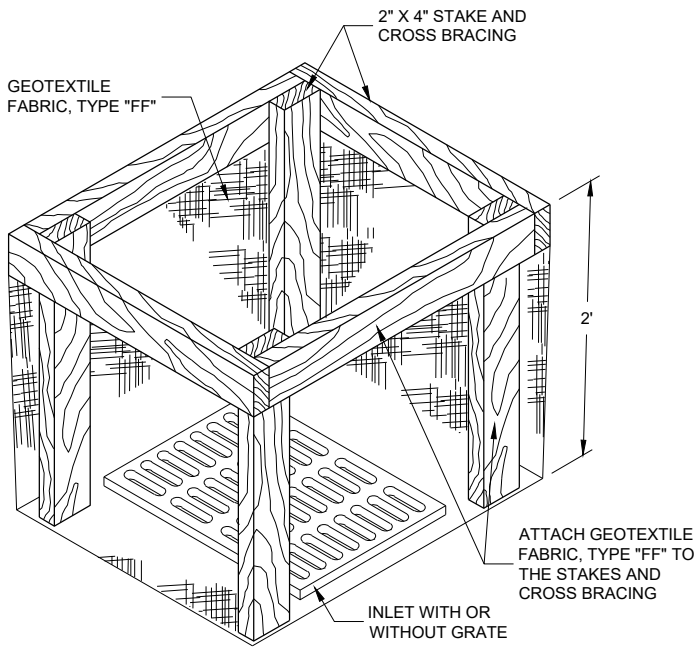
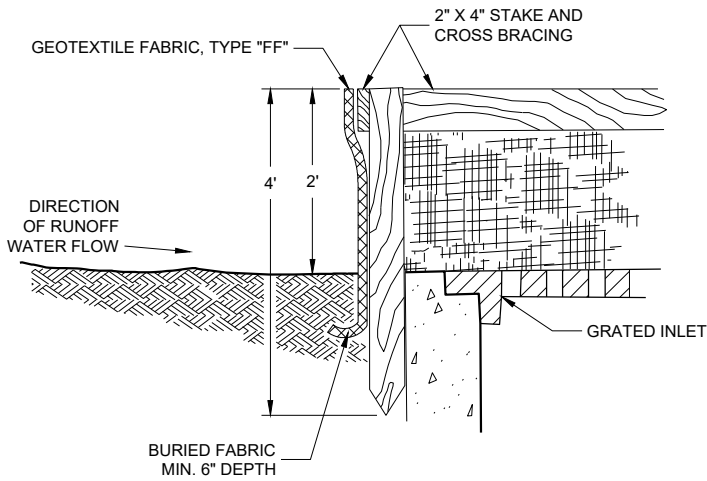
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/29/05
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT
ENGINEER

FHWA



INLET PROTECTION, TYPE "A"

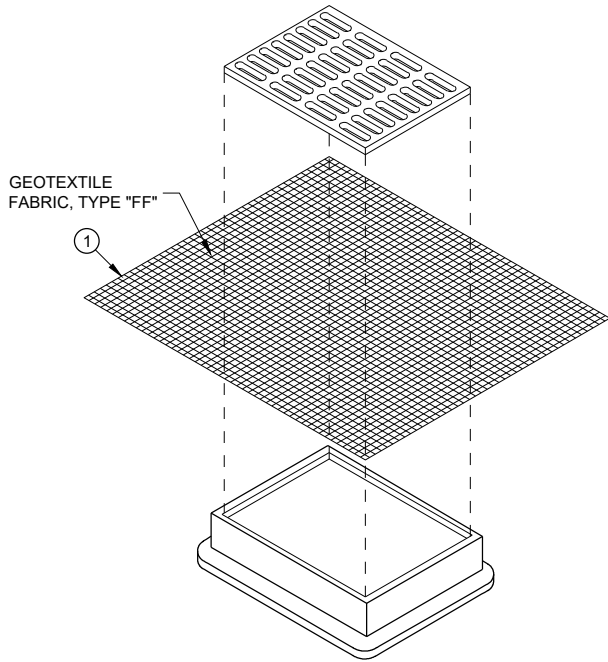
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

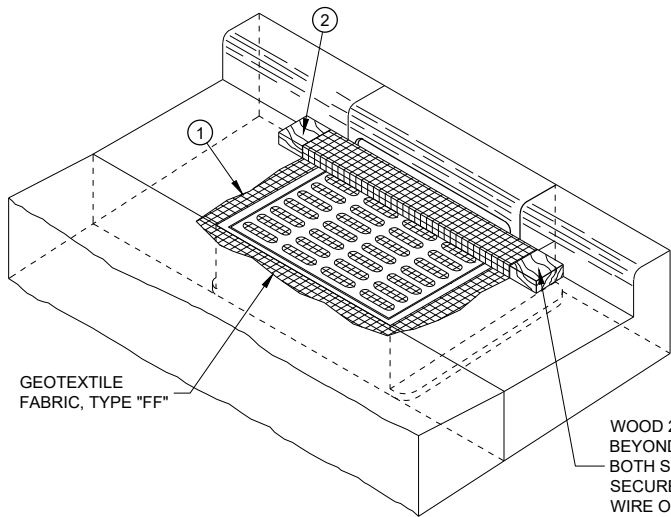
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 1 FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- 2 FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- 3 FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE "B"
(WITHOUT CURB BOX)**
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE "C"
(WITH CURB BOX)**

INSTALLATION NOTES

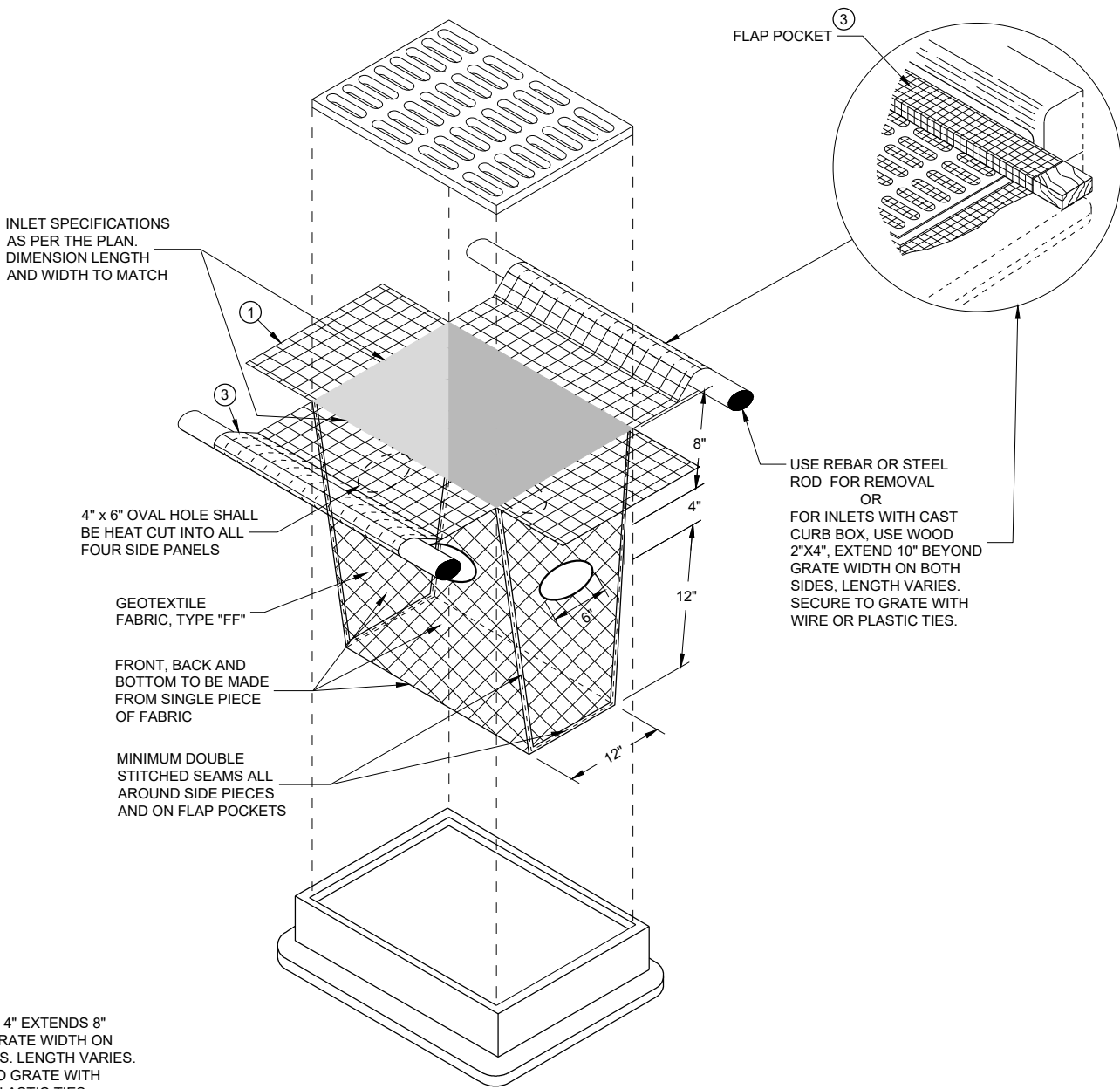
TYPES B & C
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

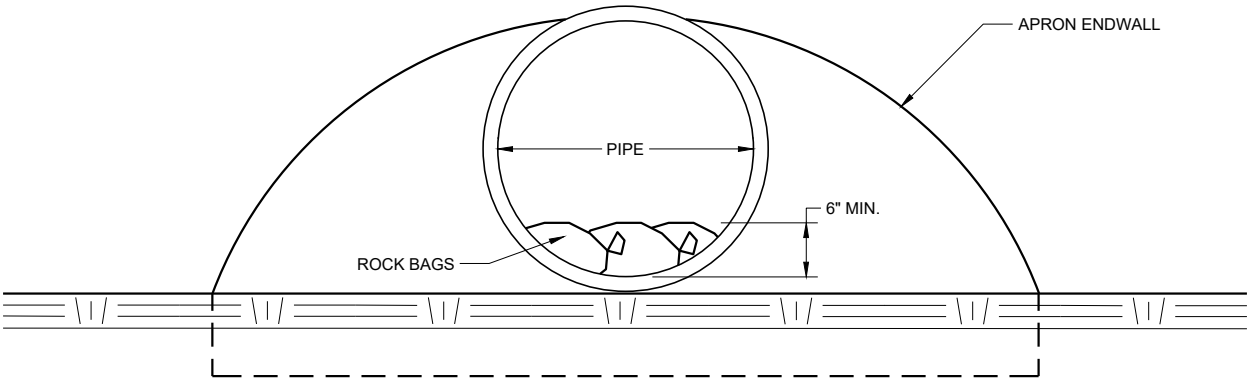


INLET PROTECTION, TYPE "D"
(CAN BE INSTALLED IN ANY INLET WITH OR WITHOUT A CURB BOX AS PER NOTE 2)

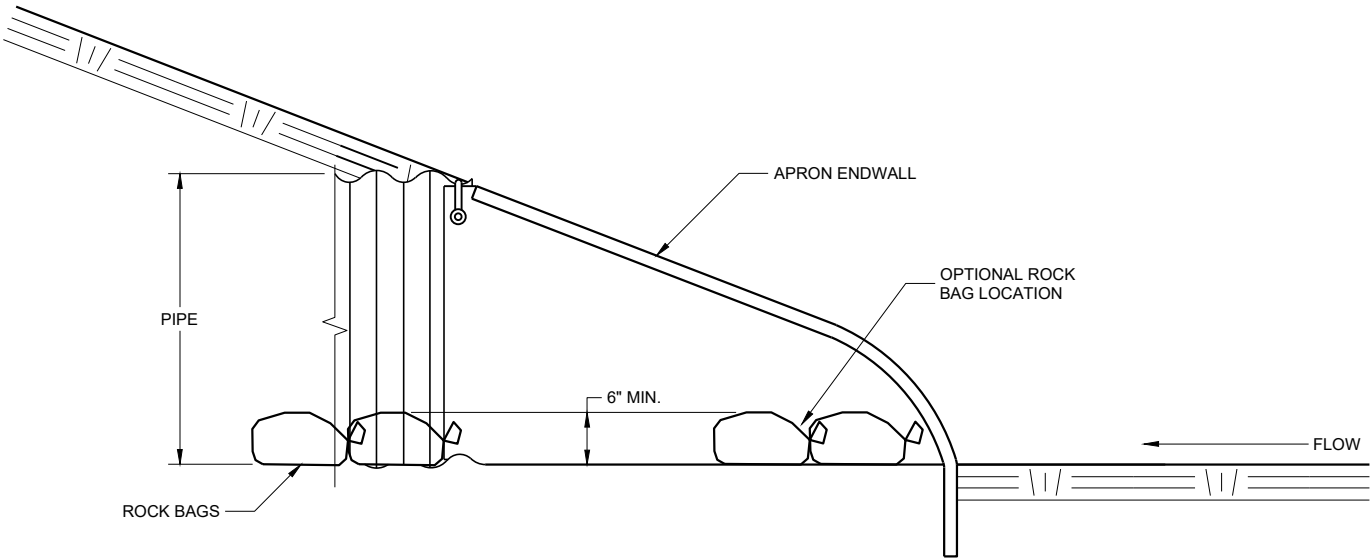
**INLET PROTECTION
TYPES A, B, C AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE /S/ Beth Cannestra
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER	65



SDD 8f1 Apron Endwalls for Culvert Pipe

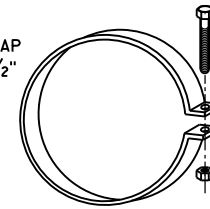
METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1/2")	L (±1/2")	L1 (1)	L2 (1)	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

* EXCEPT CENTER PANEL
SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1			
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1			
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1			
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1			
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1			
48	5	24	72	26	98	84	5	3 to 1			
54	5 1/2	27	65	33 1/4-35	98 1/4-100	90	5 1/2	2 1/2 to 1			
60	6	30-35	60	39	99	96	5	2 to 1			
66	6 1/2	34-36	72-78	21-27	99	102	5 1/2	2 to 1			
72	7	34-36	78	21	99	108	6	2 to 1			
78	7 1/2	34-36	78	21	99	114	6 1/2	2 to 1			
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1			
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1			

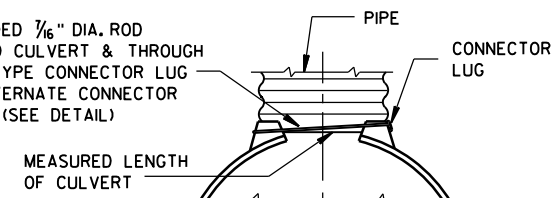
* MINIMUM
** MAXIMUM

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP

THREADED 1/6" DIA. ROD AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL)



TYPE 1
FOR 12" THRU 24" CORR. PIPE

THREADED 1/6" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



TYPE 2
FOR 30" THRU 96" CORR. PIPE

MEASURED LENGTH OF CULVERT

CONNECTOR SECTION TO BE PAID FOR AS PART OF END SECTION

COUPLING BAND REQUIRED

RIVETED OR BOLTED

TYPE 3
FOR 42" THRU 96" CORR. PIPE

DIMPLED OR CORRUGATED COUPLING BAND

RIVETED OR BOLTED AT DIMPLES (6" C-C FOR CORRUGATED BAND)

2 - 1/2" X 6" BAND BOLTS

MEASURED LENGTH OF CULVERT

TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

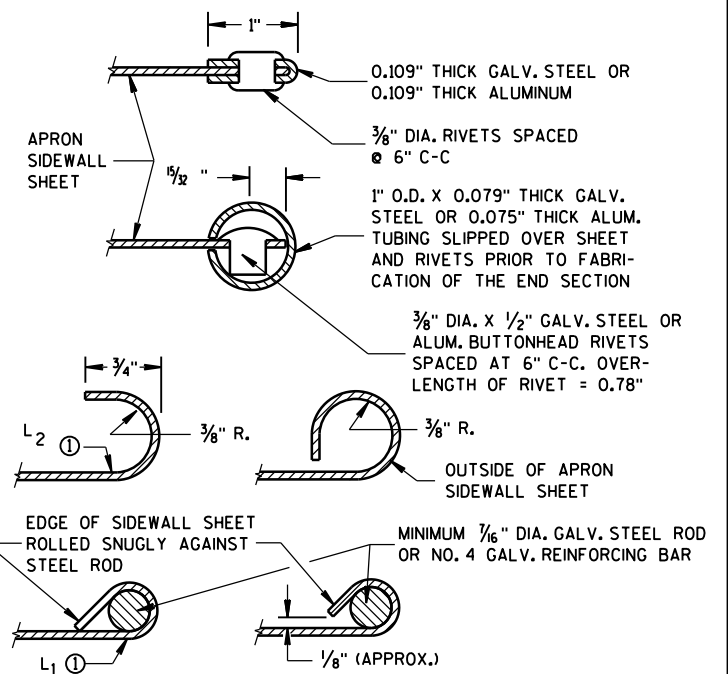
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

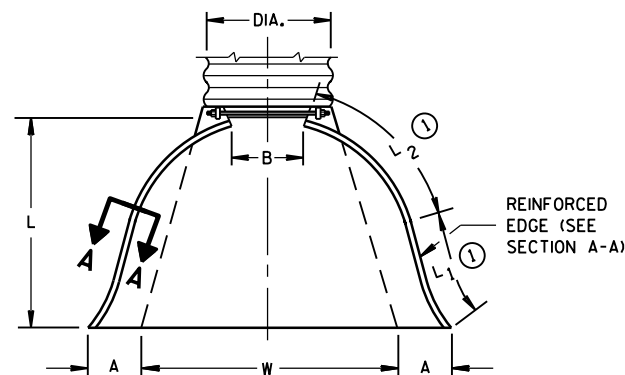
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

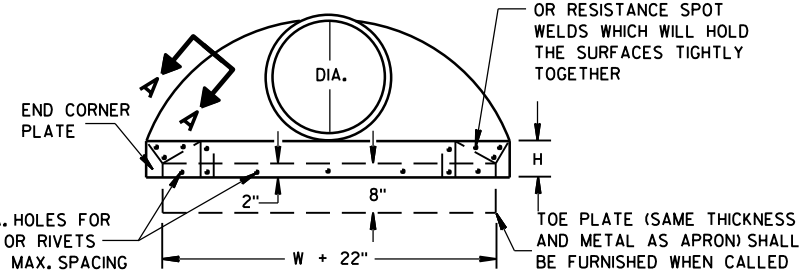
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-30-94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
66
FHWA

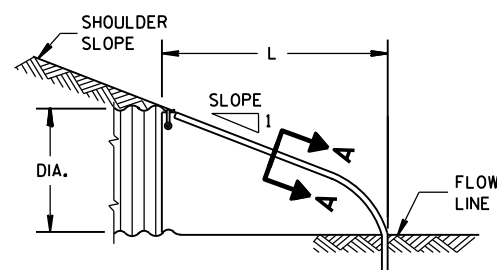


PLAN VIEW

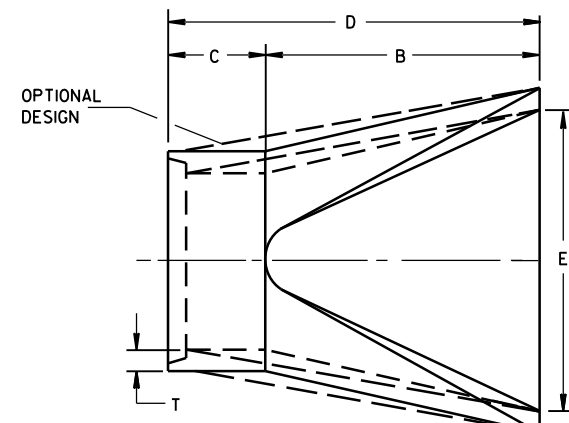
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



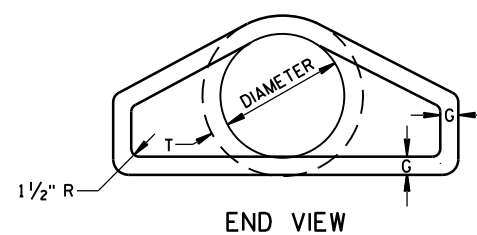
END VIEW



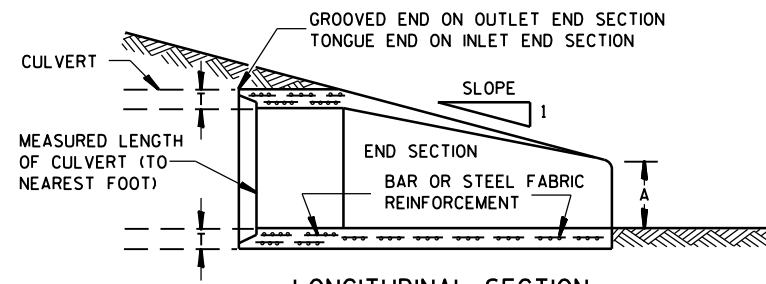
SIDE ELEVATION
METAL ENDWALLS



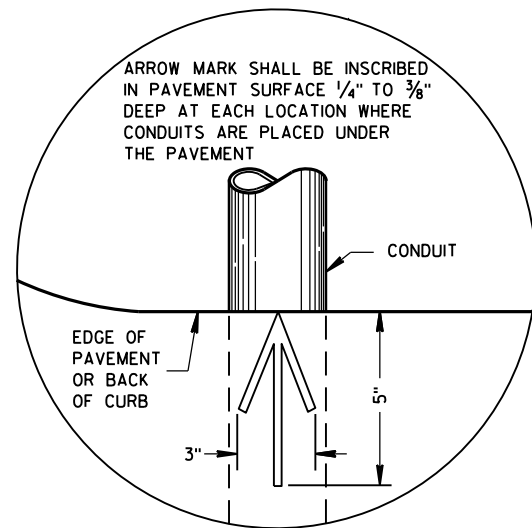
PLAN



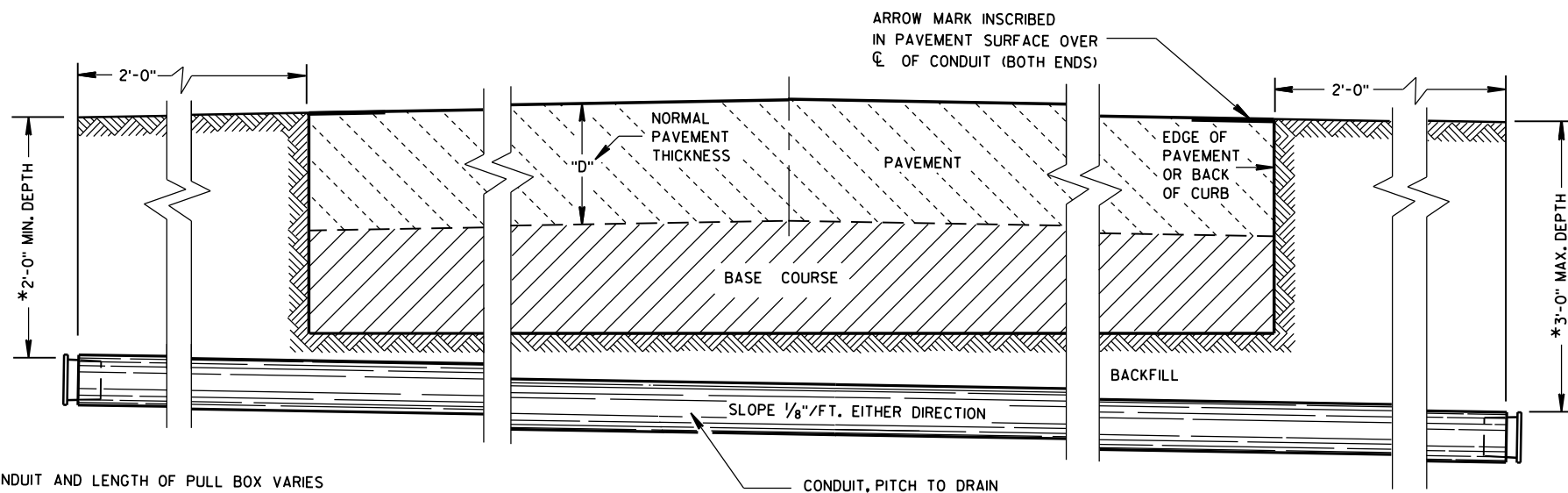
END VIEW



LONGITUDINAL SECTION
CONCRETE ENDWALLS



PLAN VIEW
ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

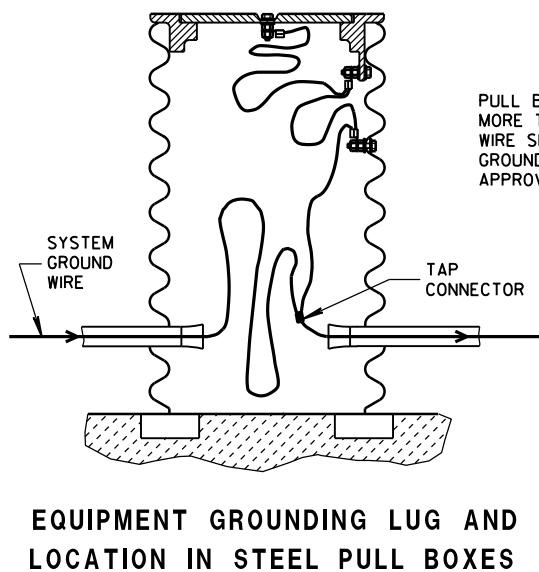
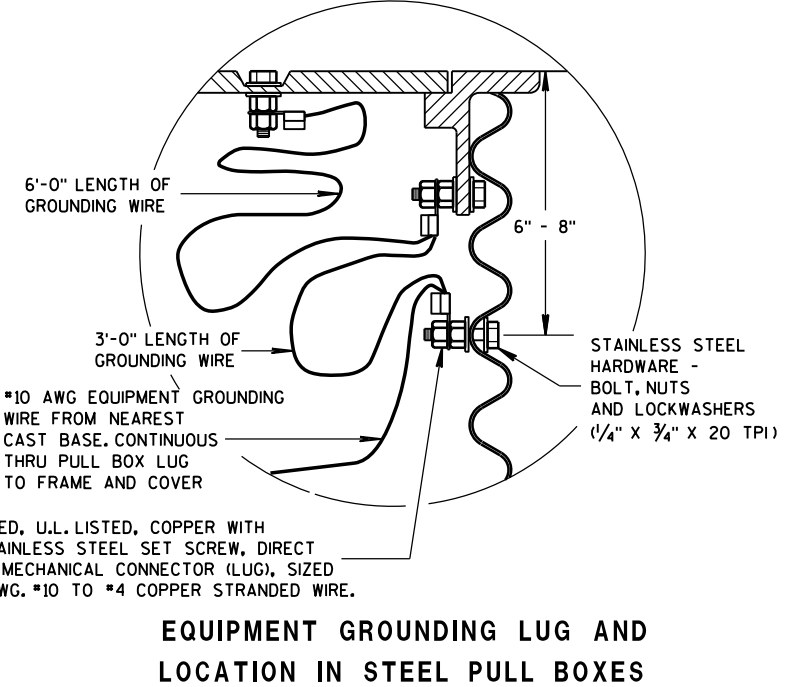
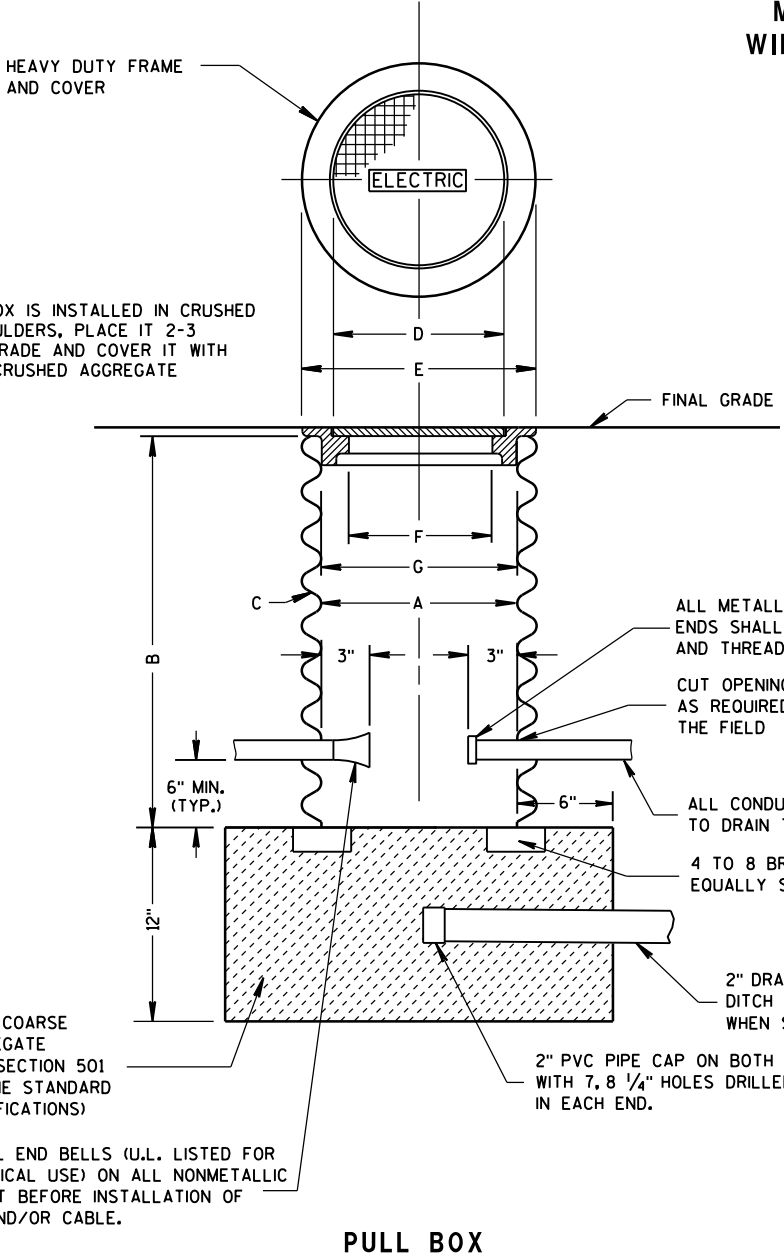
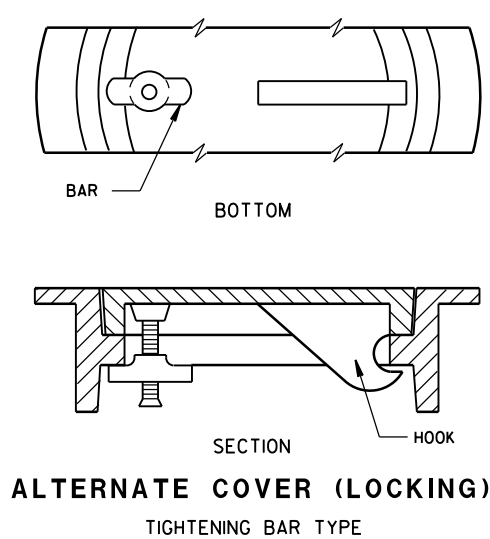
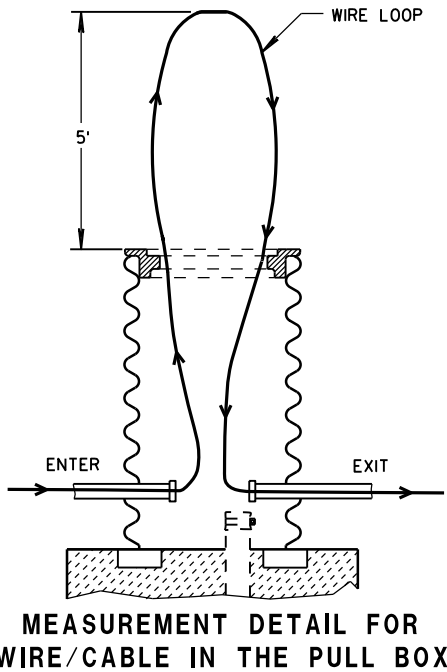
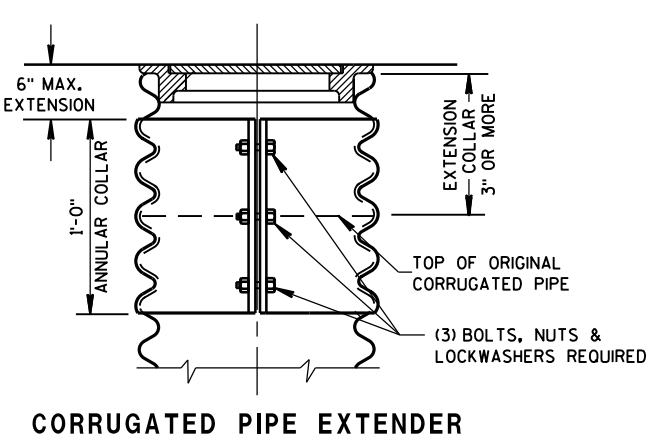
APPROVED
March, 2017 /S/ Ahmet Demirbilek 67
DATE STATE ELECTRICAL ENGINEER
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

NO. 2 COARSE AGGREGATE (SEE SECTION 501 OF THE STANDARD SPECIFICATIONS)

INSTALL END BELLS (U.L. LISTED FOR ELECTRICAL USE) ON ALL NONMETALLIC CONDUIT BEFORE INSTALLATION OF WIRE AND/OR CABLE.

PULL BOX

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
68 FHWA	

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- ② (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ③ (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- ④ (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- ⑤ (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑥ (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- ⑦ (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- ⑧ (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- ⑨ EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- ⑩ 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- ⑪ ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.
- ⑫ FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

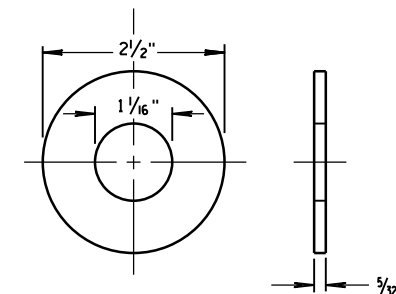
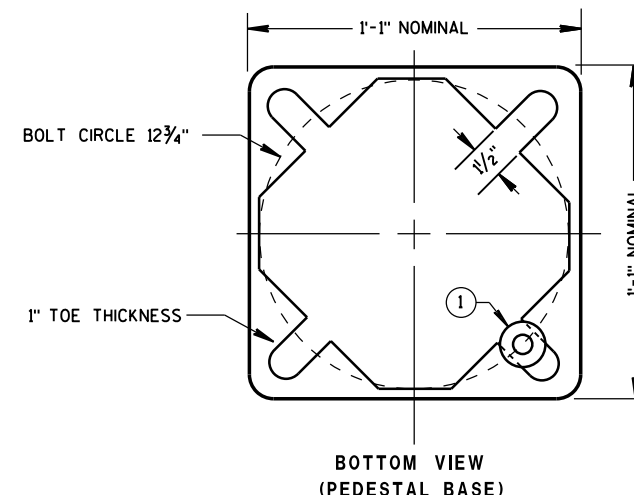
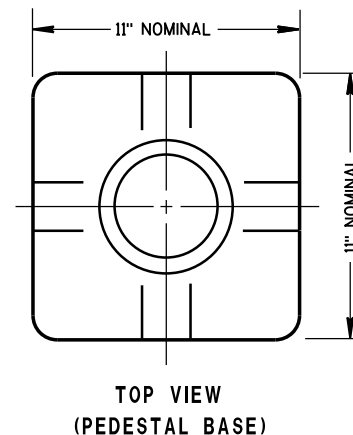
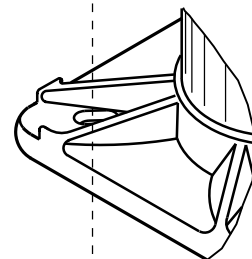
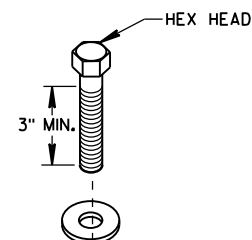
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

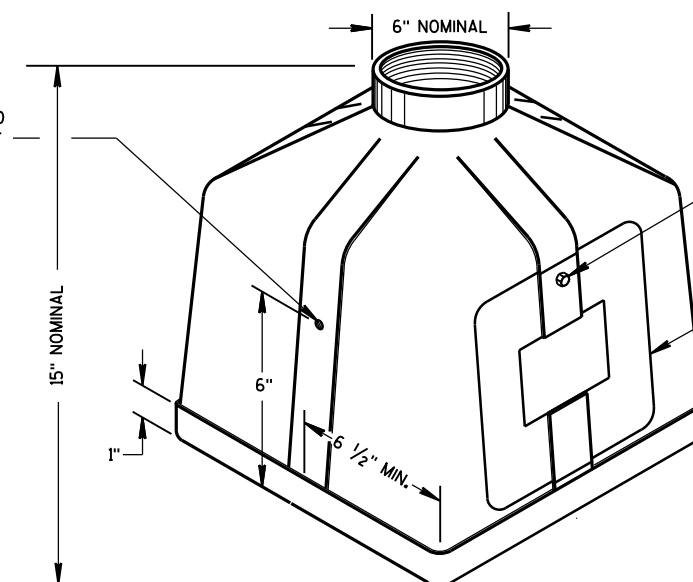
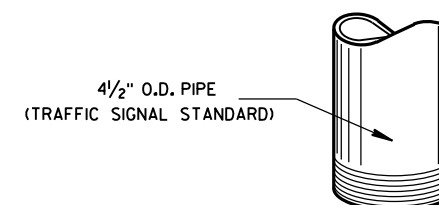
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

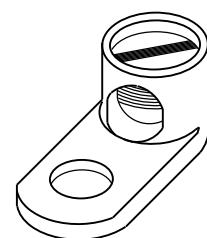
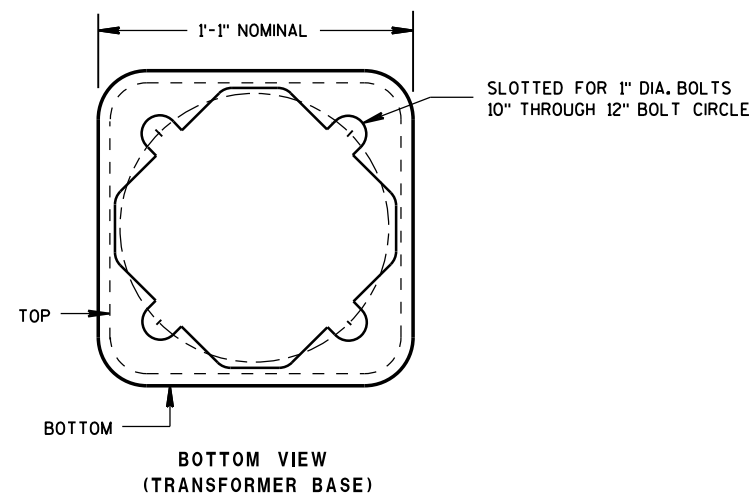


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER ①



ISOMETRIC VIEW PEDESTAL BASE

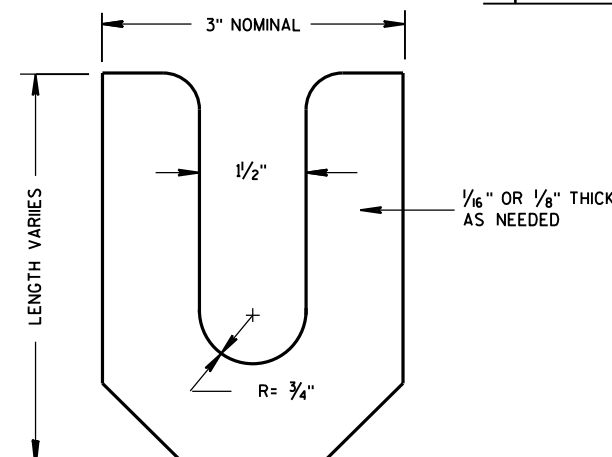
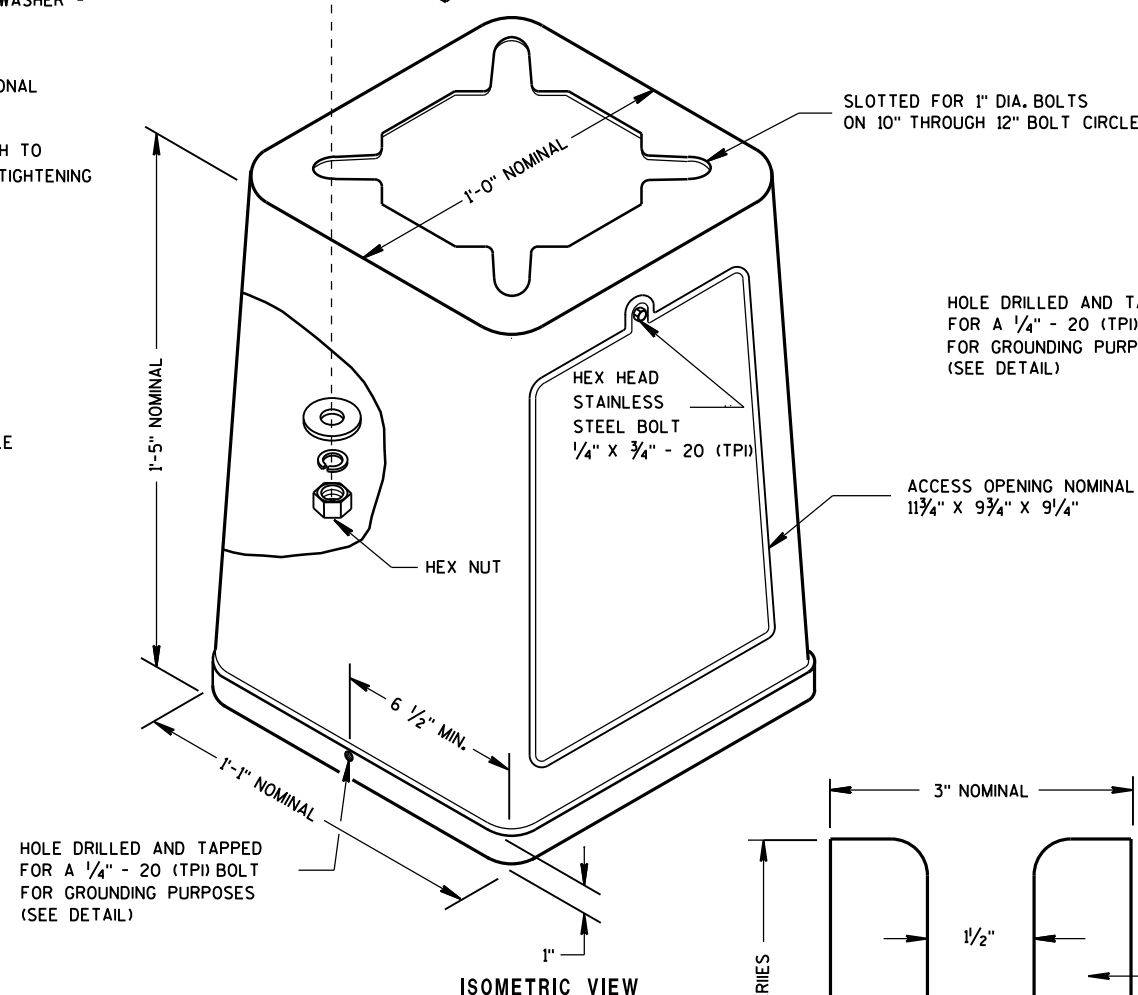


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
FWHA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

70

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN
ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF
THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NONMETALLIC CONDUIT SHALL HAVE BELL END INSTALLED. ALL CONDUIT SHALL BE SLOPED TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUIT IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

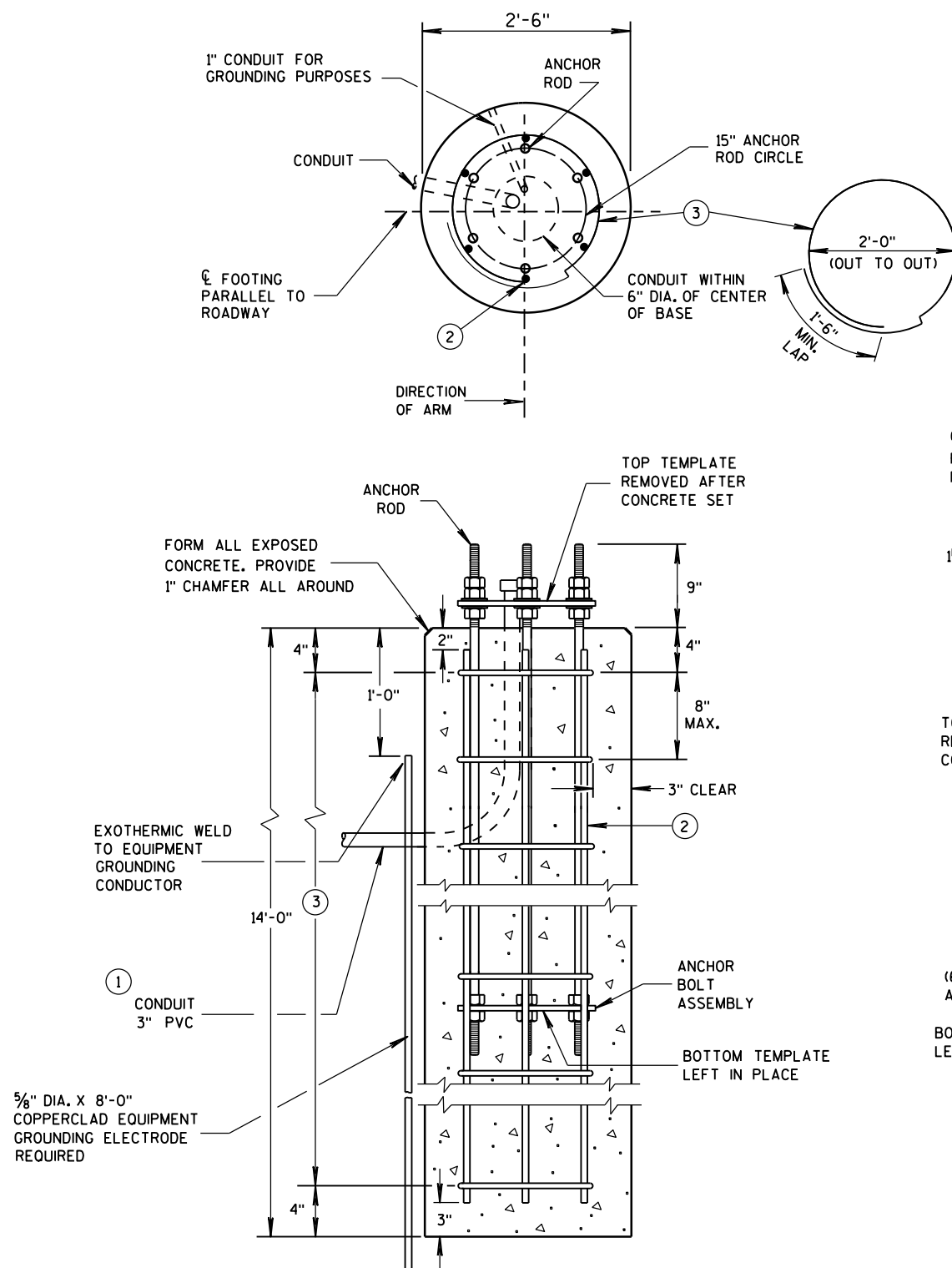
A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

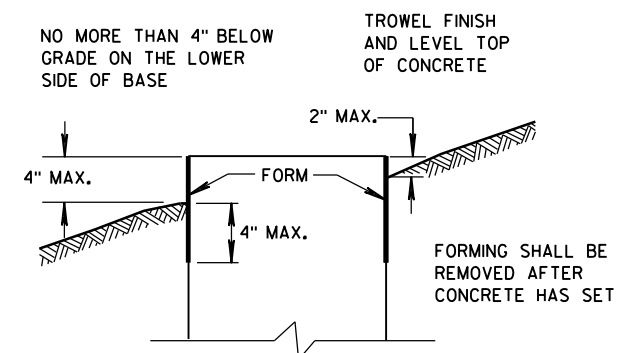
WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

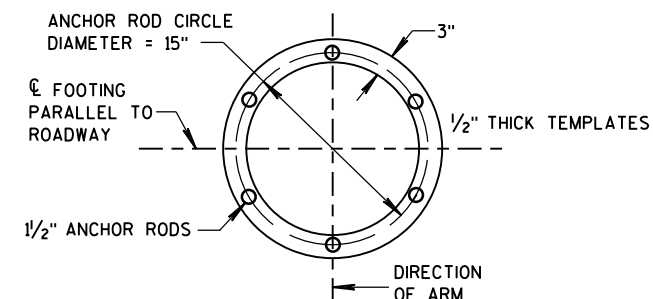
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.



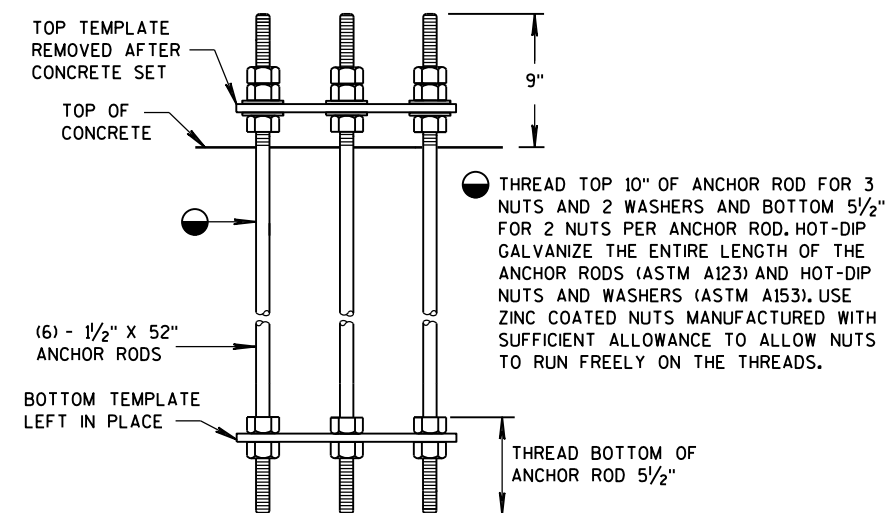
FORMING DETAIL



TOP AND BOTTOM TEMPLATES



ANCHOR BOLT ASSEMBLY DETAIL



CONCRETE BASE TYPE 10 ANCHOR ASSEMBLY

QUANTITY REQUIREMENTS	
APPROX. CUBIC YARDS OF CONCRETE	2.5
LBS. OF HOOP BAR STEEL	172
LBS. OF VERTICAL BAR STEEL	122

CONCRETE BASE TYPE 10

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

BASES (SHAFT) SHALL BE EXCAVATED BY THE USE OF A CIRCULAR AUGER. IF BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE SOIL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING. A STEEL CASING OR CORRUGATED METAL PIPE IS ALLOWED TO REMAIN. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BASE IN LAYERS OF ONE FOOT OR LESS.

TOP SURFACE OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

ANY DAMAGE TO THE CONCRETE BASE AND ANCHOR RODS DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED AT THE ENGINEER'S DIRECTION, AT THE EXPENSE OF THE CONTRACTOR.

THE REINFORCEMENT AND ANCHOR RODS SHALL BE ADEQUATELY SUPPORTED IN THE PROPER POSITIONS SO NO MOVEMENT OCCURS DURING CONCRETE PLACEMENT.

ORIENT ANCHOR RODS IN FOOTING AND PROVIDE ANCHOR RODS STICK OUT ABOVE TOP OF CONCRETE FOOTING BASE PER THIS SHEET.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

BENDING DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.

WELDING OF ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TEMPLATES SHALL BE USED.

USE 3" CLEAR FOR ALL REINFORCEMENT UNLESS NOTED OTHERWISE.

FORM ALL EXPOSED CONCRETE CORNERS WITH 1" CHAMFER ALL AROUND. TOP OF THE CONCRETE BASE SHALL BE TROWEL FINISHED AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 TIMES THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 4 1/2" INCHES. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED. NON-METALLIC CONDUIT SHALL HAVE BELL ENDS INSTALLED. ALL CONDUIT SHALL SLOPE TO PULL BOX.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

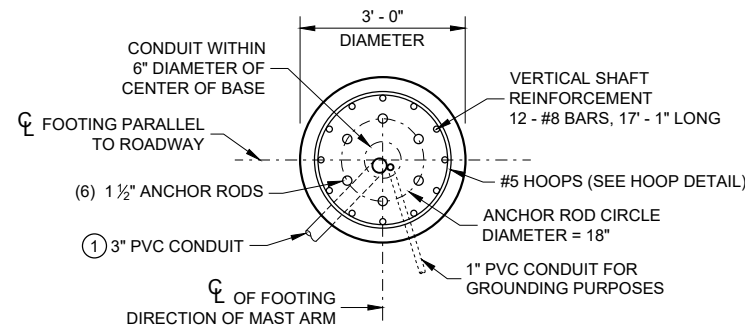
A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

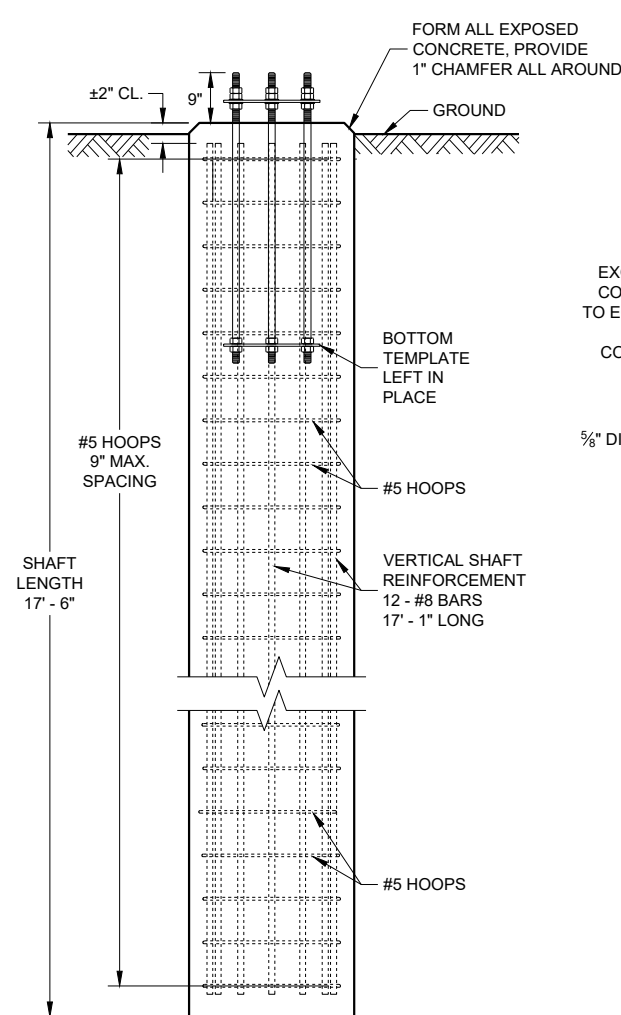
THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

- ① THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES (GREATER THAN 36 INCHES IF INSTALLED IN BREAKER RUN) EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

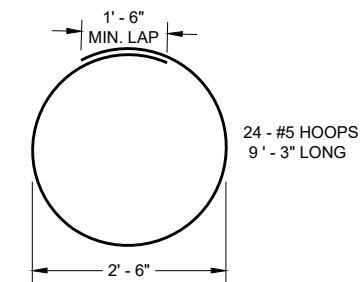
CONCRETE MASONRY.....fc = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60.....fy = 60,000 p.s.i.
ANCHOR RODS, ASTM F1554 GRADE 55 (IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATION).....fy = 55,000 p.s.i.
TEMPLATES, ASTM A709, GRADE 36.....fy = 36,000 p.s.i.



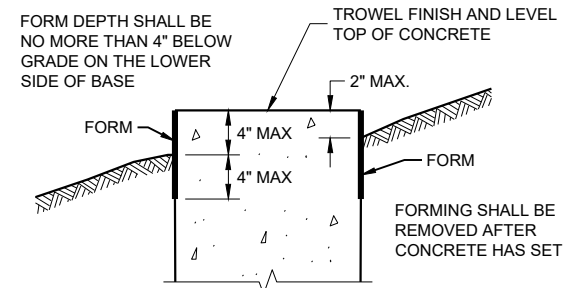
PLAN VIEW



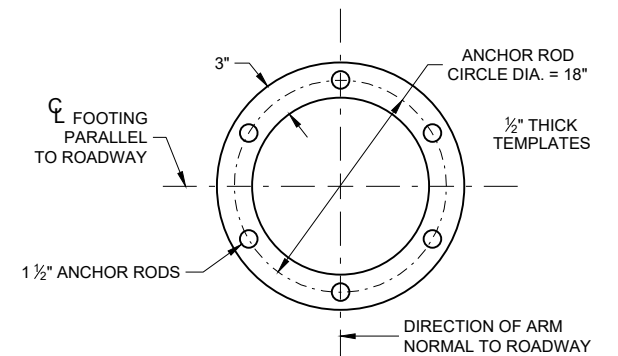
ELEVATION VIEW
(CONDUITS NOT SHOWN ON THIS VIEW FOR CLARITY)



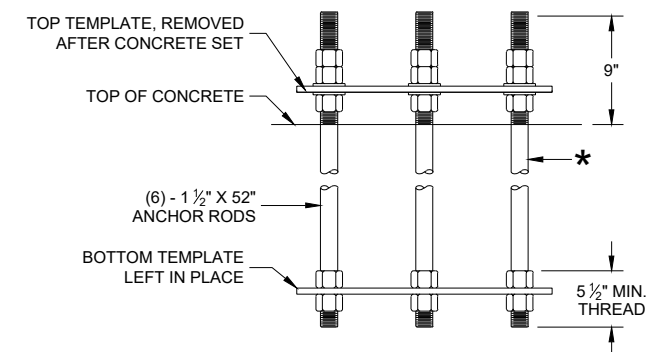
HOOP DETAIL



FORMING DETAIL



TOP AND BOTTOM TEMPLATE



ANCHOR ROD ASSEMBLY DETAILS

- * THREAD TOP 10" OF ANCHOR ROD FOR 3 NUTS AND 2 WASHERS AND BOTTOM 5 1/2" FOR 2 NUTS PER ANCHOR ROD. HOT DIP GALVANIZE THE ENTIRE LENGTH OF THE ANCHOR ROD (ASTM A123) AND HOT DIP NUTS AND WASHERS (ASTM A153. USE ZINC COATED NUTS MANUFACTURED WITH SUFFICIENT ALLOWANCE TO ALLOW NUTS TO RUN FREELY ON THE THREADS.

CONCRETE BASE, TYPE 10 SPECIAL (FOR TYPE 9 SPECIAL AND TYPE 10 SPECIAL POLES)

CONCRETE = 4.6 CUBIC YARD
H.S. REINFORCEMENT = 779 LBS.

FOR USE WHEN GROUND ELEVATION AT BASE EQUALS OR IS GREATER THAN HIGH POINT OF ROADWAY ELEVATION.

CONCRETE BASE TYPE 10 SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Alex Crabtree 72
DATE WIND LOADED STRUCTURES
PROGRAM LEADER
FHWA

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE, CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH, THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

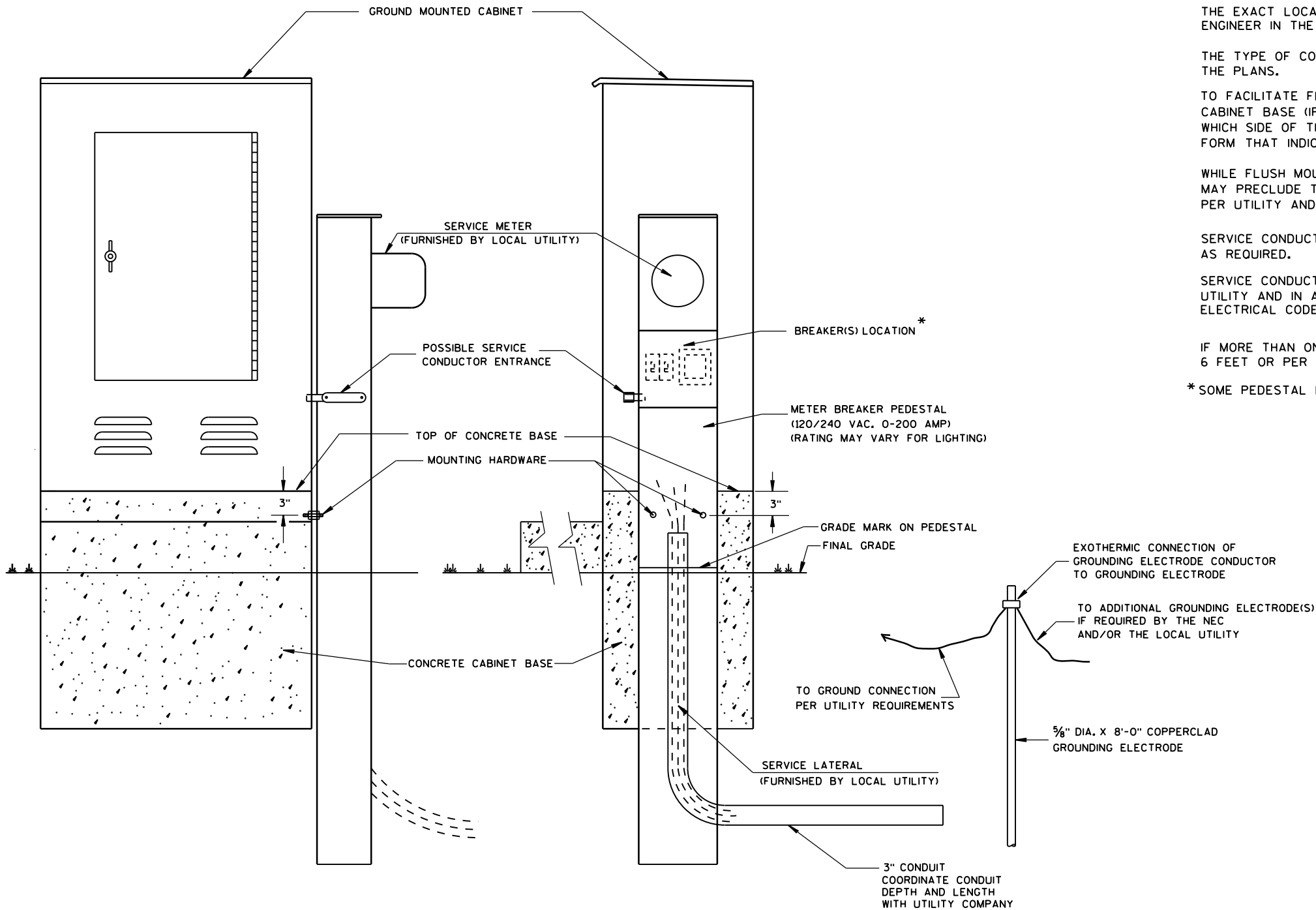
WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.



TYPICAL CABINET SERVICE INSTALLATION

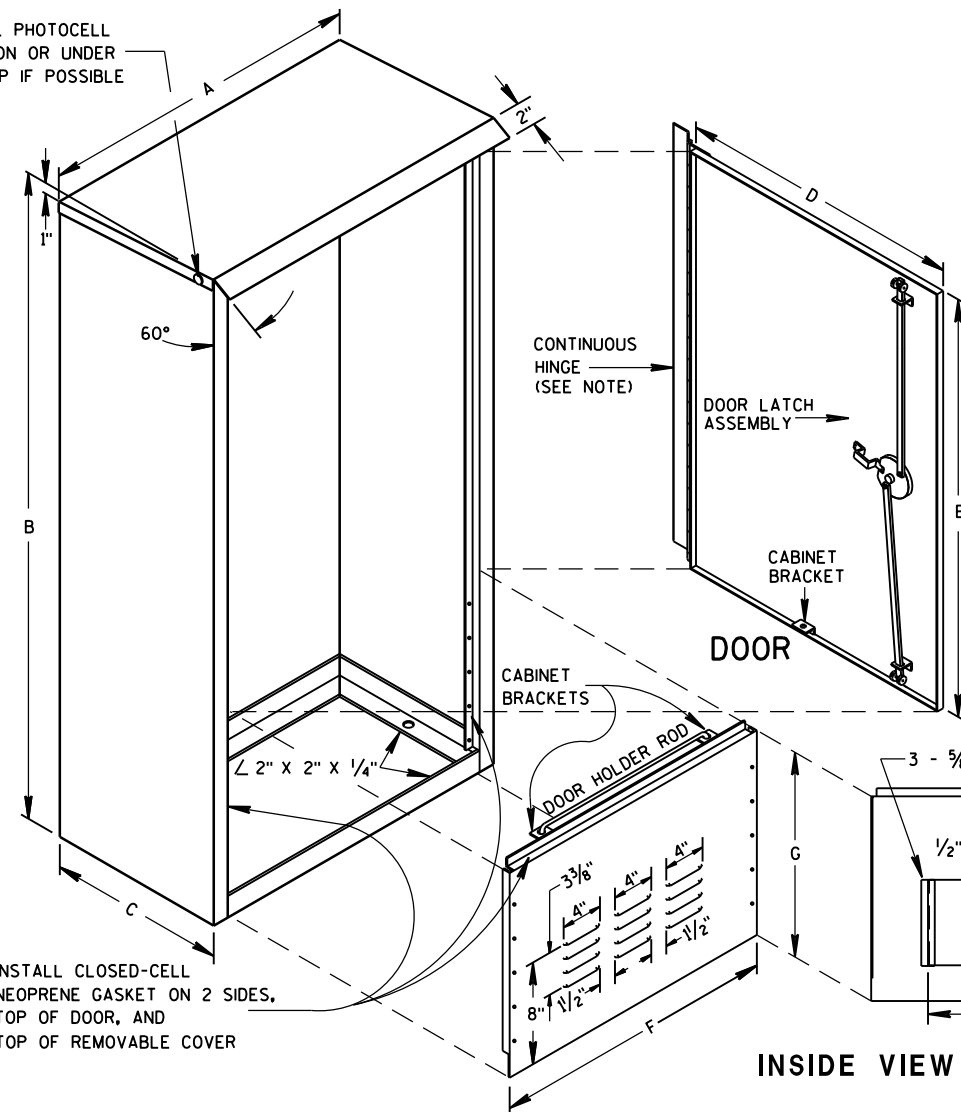
CABINET SERVICE INSTALLATION
(METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 /S/ Ahmet Demirbilek 73
DATE STATE ELECTRICAL ENGINEER
FHWA

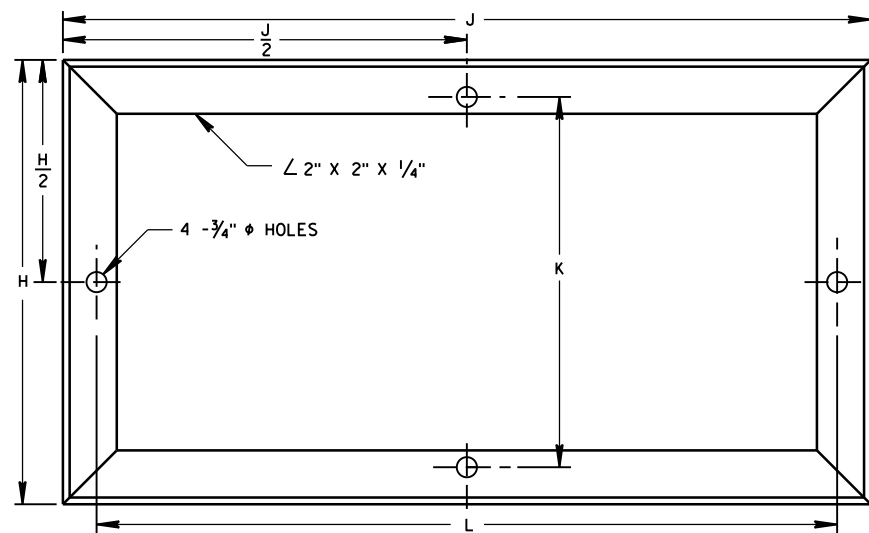


TYPICAL PHOTOCELL
LOCATION OR UNDER
DRIP LIP IF POSSIBLE

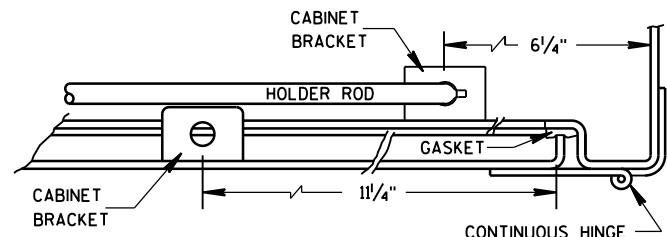


INSTALL CLOSED-CELL
NEOPRENE GASKET ON 2 SIDES,
TOP OF DOOR, AND
TOP OF REMOVABLE COVER

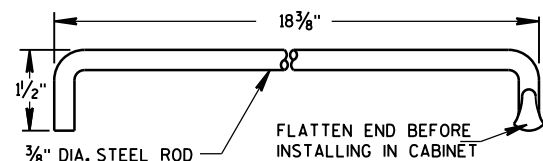
REMOVABLE COVER



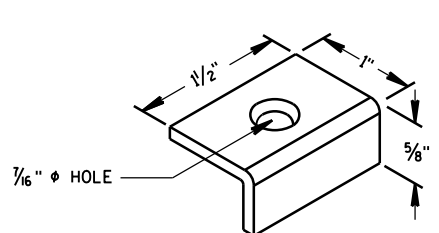
MOUNTING BASE



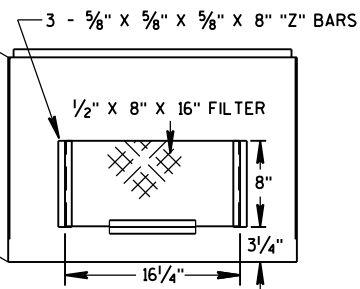
HINGE & DOOR HOLDER



HOLDER ROD



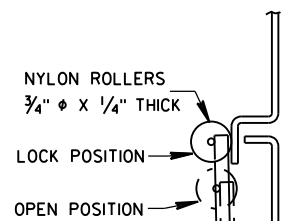
CABINET BRACKET



INSIDE VIEW SHOWING FILTER

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

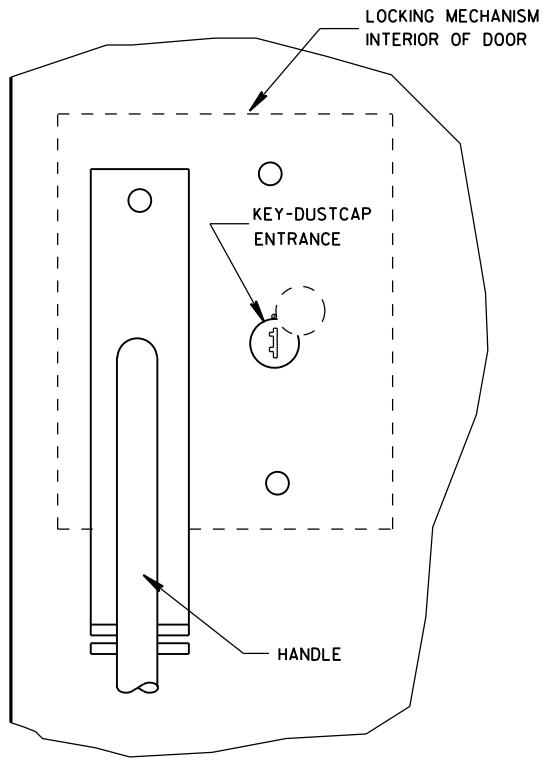


LATCH BAR
GUIDE

3/4" SOLID STAINLESS STEEL
INWARD-TURNING HANDLE WITH
PROVISIONS FOR PADLOCKING

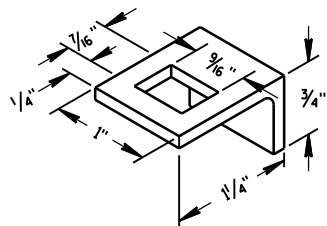
LATCH BARS
1/2" X 1/4" X
LENGTH REQUIRED

SIDE VIEW



FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.

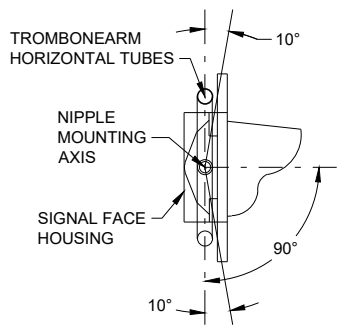
SIGNAL
CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

74

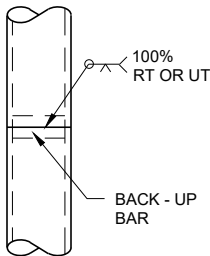


SECTION A-A

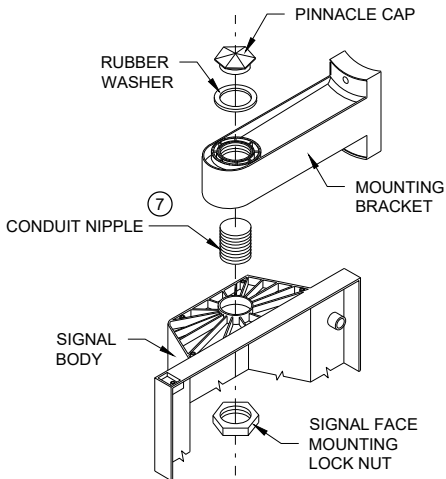
(10 DEGREES TILT REQUIREMENT OF FACE(S) IN THE TROMBONE MOUNTING)

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN / BRIDGE FOR VERIFICATION AND APPROVAL.



POLE SPLICE DETAIL



SIGNAL FACE MOUNTING DETAIL (BANDED)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLES SHALL BE EITHER ALUMINUM OR GALVANIZED STEEL AS CALLED FOR IN THE CONTRACT.

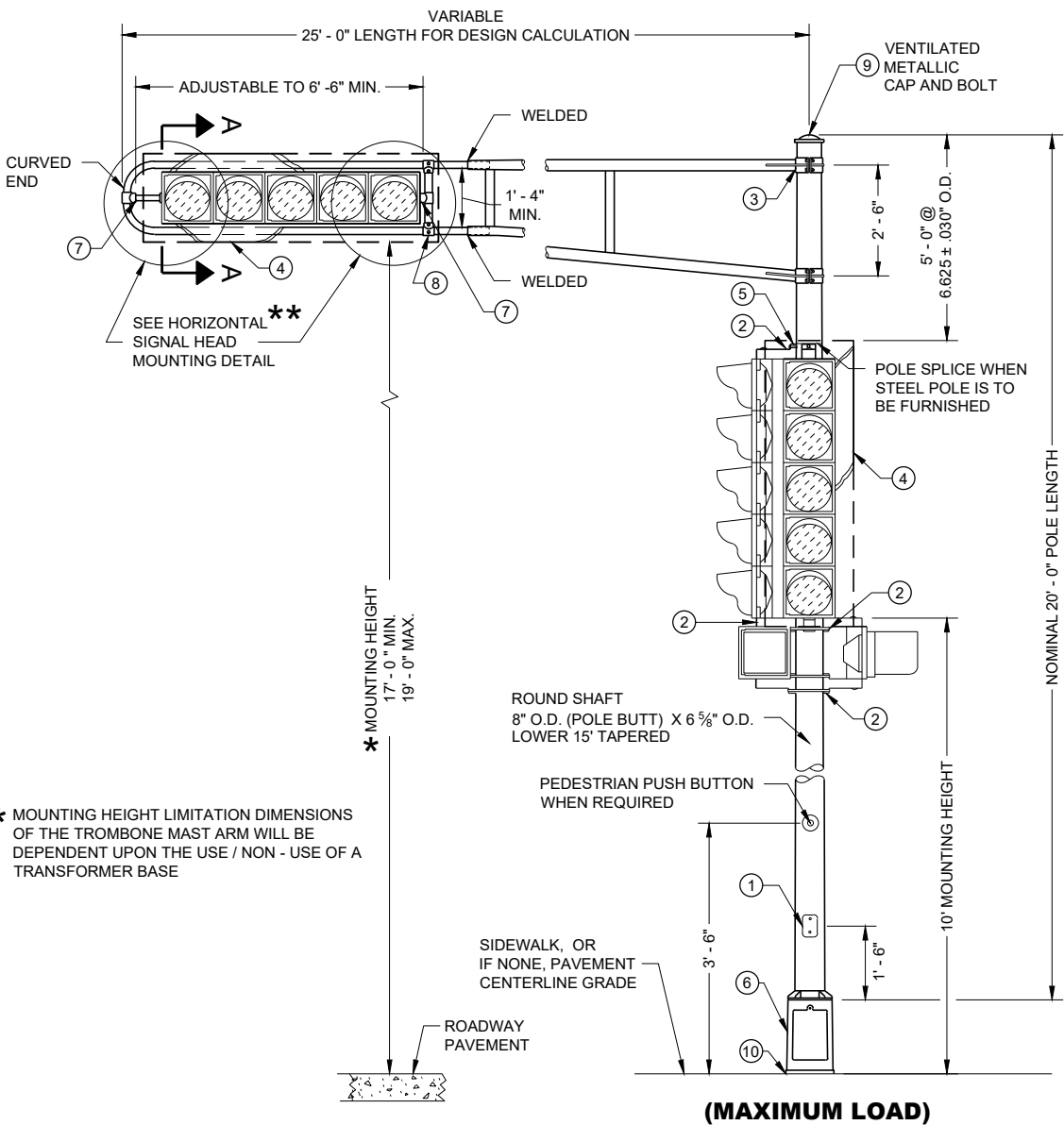
SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

TYPE 2 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

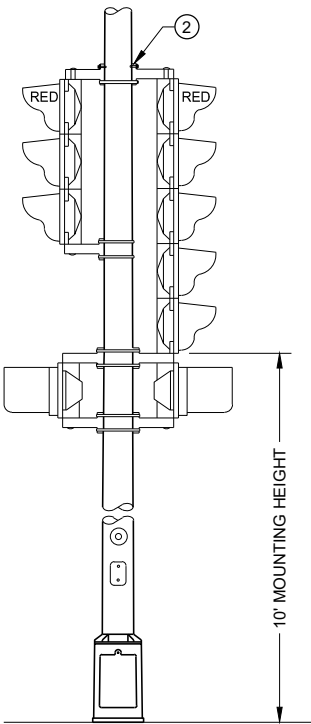
WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- ③ GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ④ SECURELY MOUNT DULL BLACK POLYCARBONATE BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- ⑤ POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACES.
- ⑥ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ⑦ USE 1 1/2" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.
- ⑧ VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUTS THE SLIDING TYPE.
- ⑨ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑩ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.
- ⑪ USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

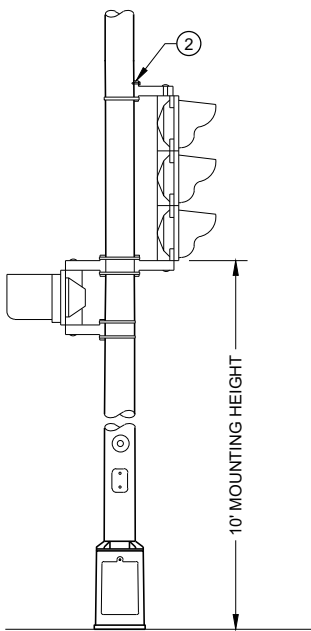


* MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE / NON - USE OF A TRANSFORMER BASE

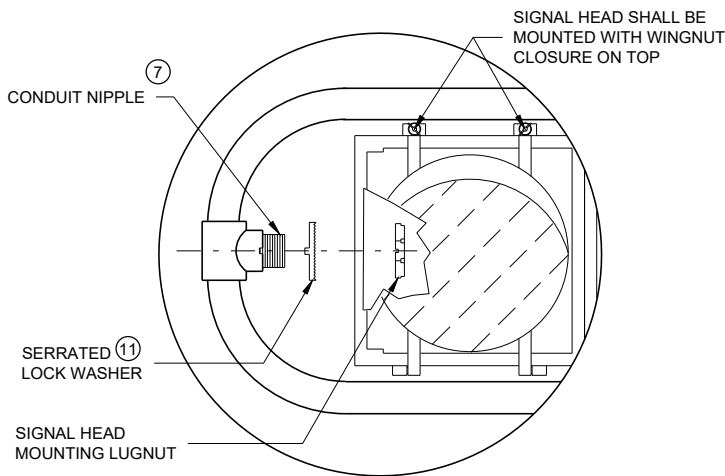
(MAXIMUM LOAD)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE

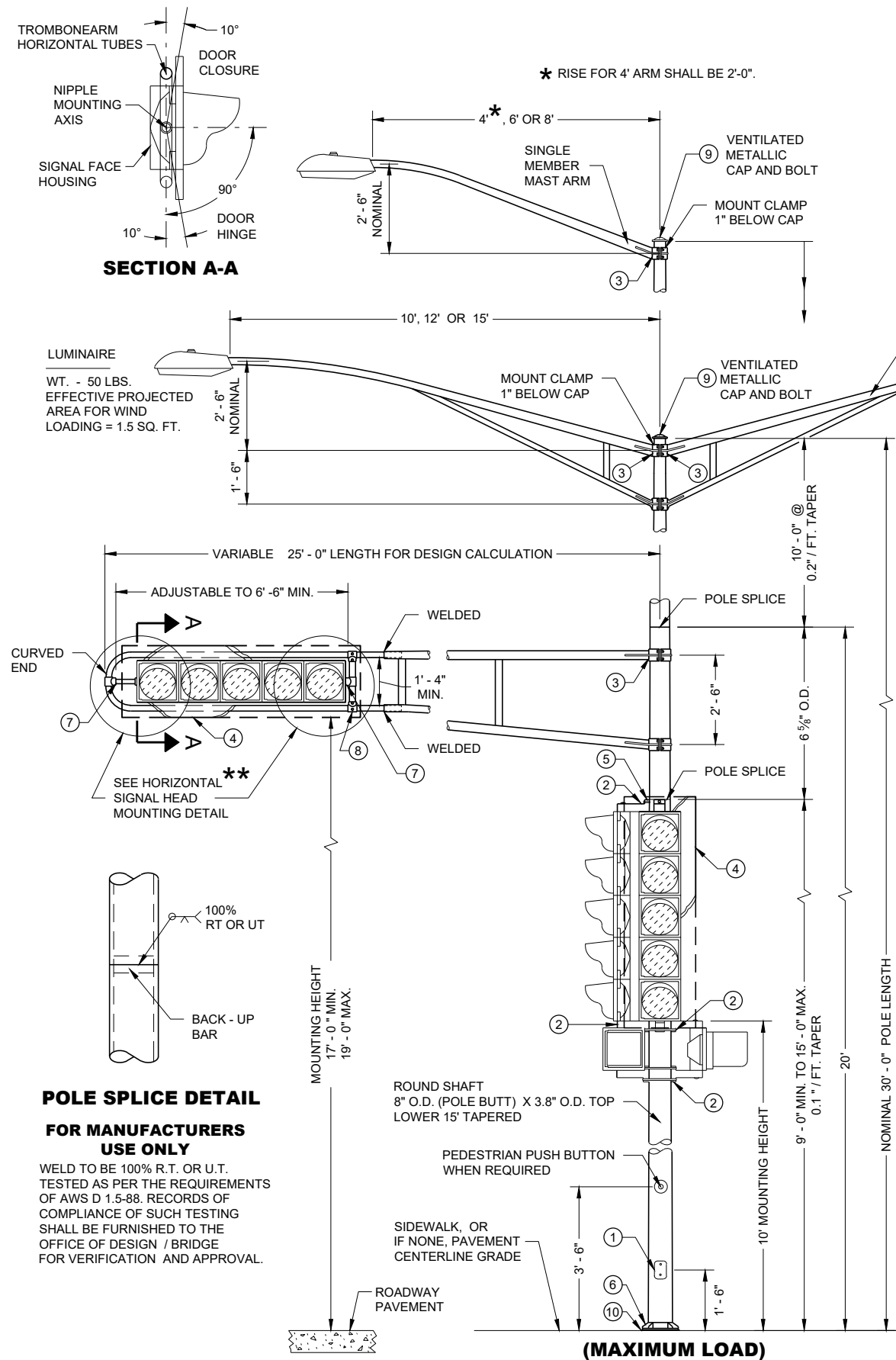


HORIZONTAL SIGNAL HEAD MOUNTING DETAIL

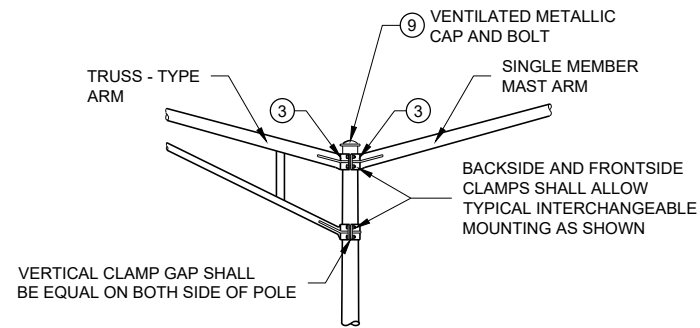
** SIGNAL HEAD ATTACHMENT ALSO APPLIES TO MOUNTING AT CROSS BAR

POLE MOUNTINGS FOR TRAFFIC SIGNALS TYPE 2

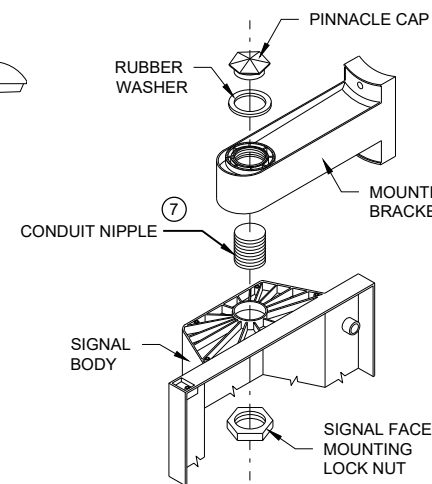
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



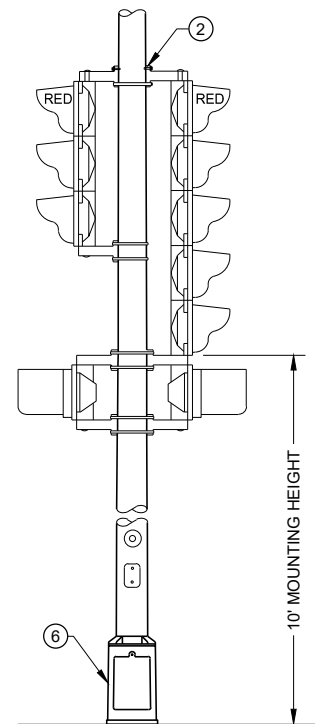
INTERCHANGEABLE MOUNTING DETAIL



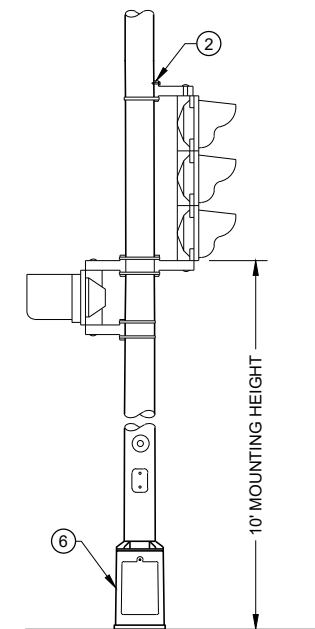
SIGNAL FACE MOUNTING DETAIL (BANDED)



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES

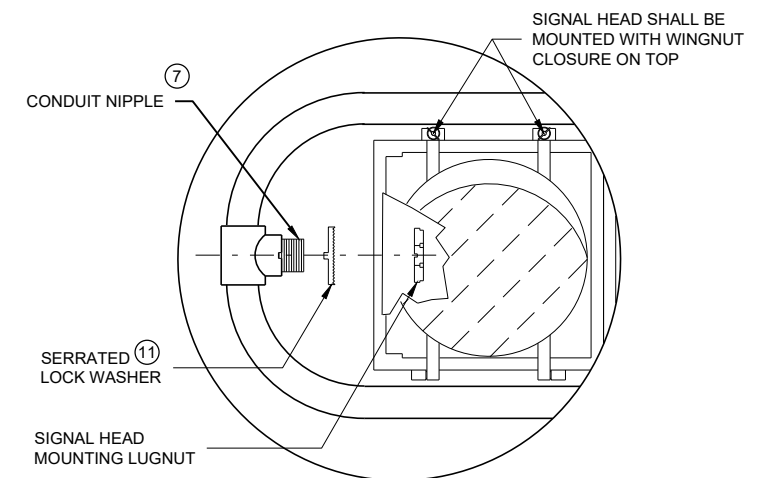


TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



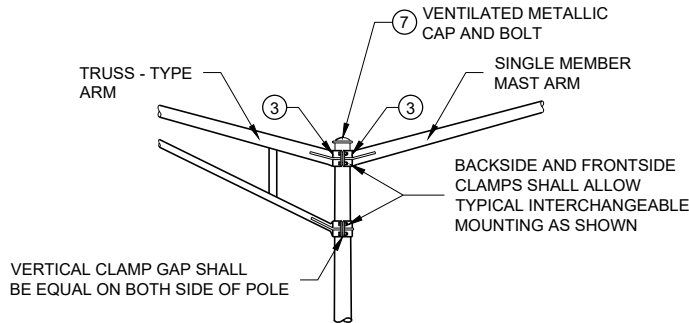
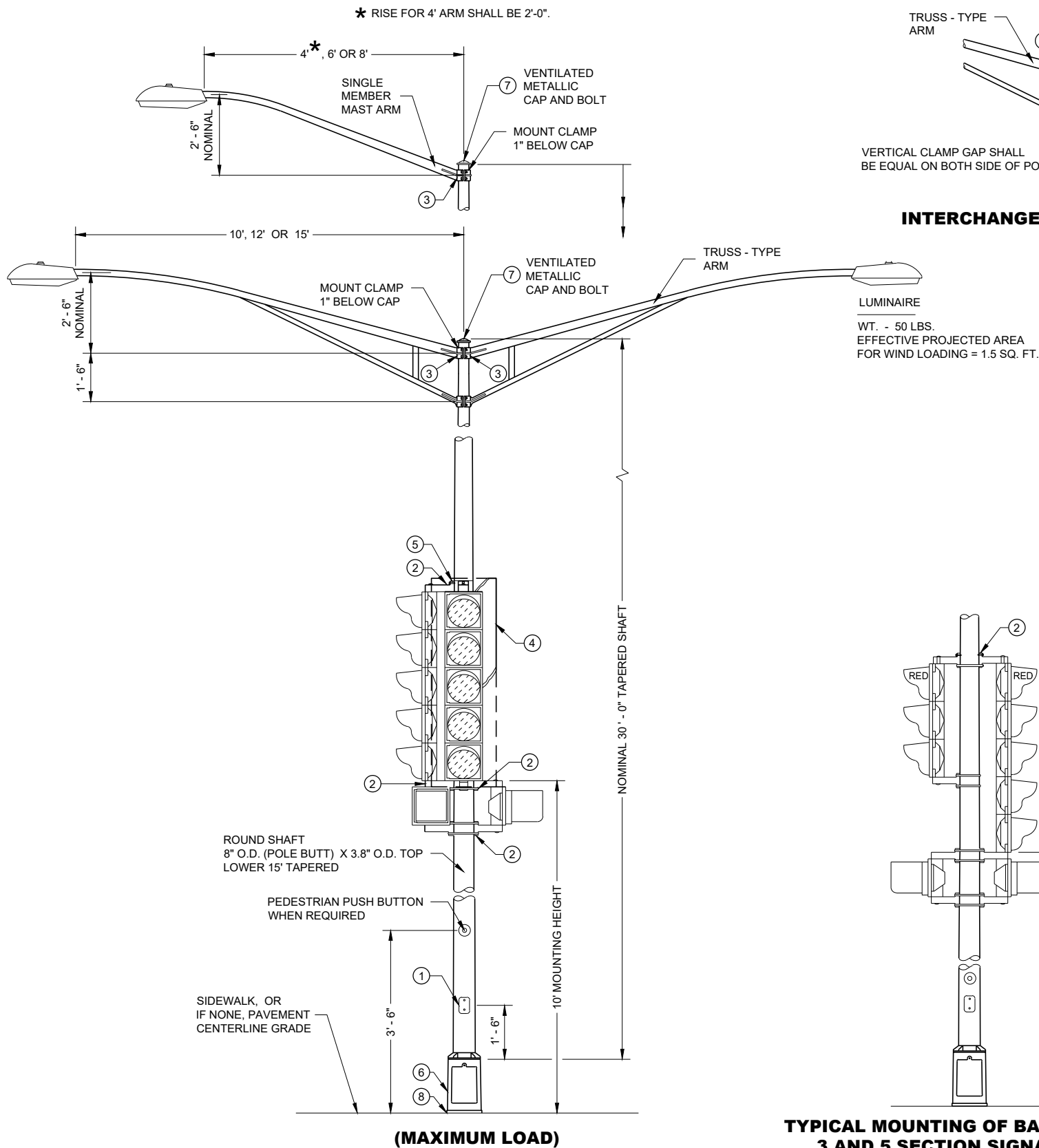
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL**

**** SIGNAL HEAD ATTACHMENT ALSO
APPLIES TO MOUNTING AT CROSS BAR**



POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS TYPE 3 (HEAVY DUTY)

SDD 09E01-c Pole Mountings for Traffic Signals and Lighting Units, Type 4



INTERCHANGEABLE MOUNTING DETAIL

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL TYPE 4 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL WITH A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

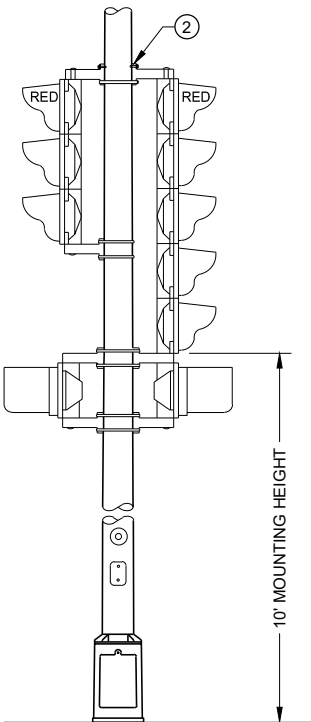
SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE / ROPE SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

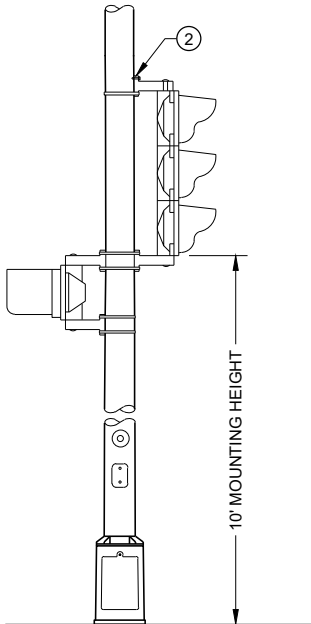
THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

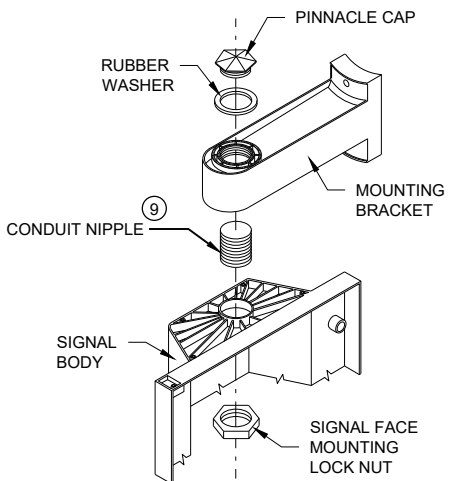
- 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/2" X 3/4" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.
- SIGNAL FACE MOUNTING BRACKETS. MOUNT WITH CAP SCREWS AND BANDING.
- GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 1/2" HOLE IN POLE SHAFT FOR WIRING.
- SECURELY MOUNT DULL BLACK POLYCARBONATE BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- POLE MOUNTED SIGNAL FACES SHALL REQUIRE ONE OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/2" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- USE 1 1/2" ID NIPPLES ZINC-COATED RIGID METAL CONDUIT, LONG ENOUGH TO ACCOMMODATE FULL DEPTH THREADING INTO THE HEAD MOUNTING LOCK NUT IN ORDER TO TIGHTEN THE FACE, BUT THAT DO NOT INTERFERE WITH REFLECTOR CLOSURE. THREAD THE NIPPLE INTO THE MOUNTING BRACKET/ELBOW UNTIL TIGHT. USE APPROVED PINNACLE TYPE HARDWARE FROM A DEPARTMENT APPROVED MANUFACTURER TO CLOSE THE UNUSED 1 1/2" OPENING IN SIGNAL FACES AND BRACKET ENDS.



TYPICAL MOUNTING OF BACK TO BACK 3 AND 5 SECTION SIGNAL FACES

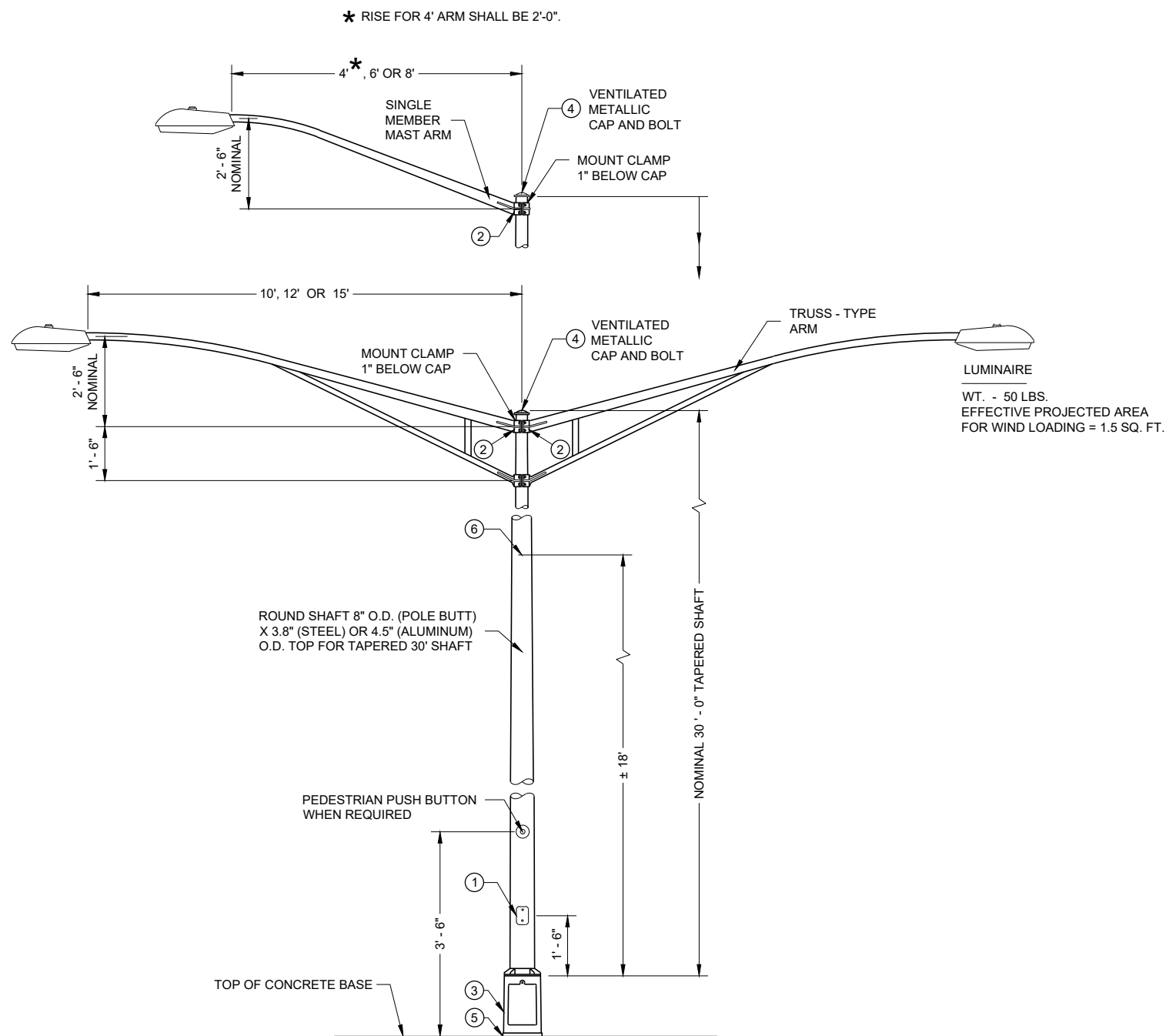


TYPICAL MOUNTING OF 3 SECTION SIGNAL FACE



SIGNAL FACE MOUNTING DETAIL (BANDED)

POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 4



**TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY**

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVEING INSIDE THE POLE IS NOT ACCEPTABLE.

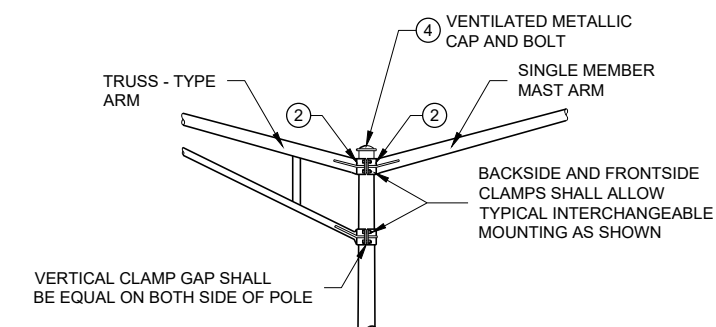
TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 3/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 3/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.

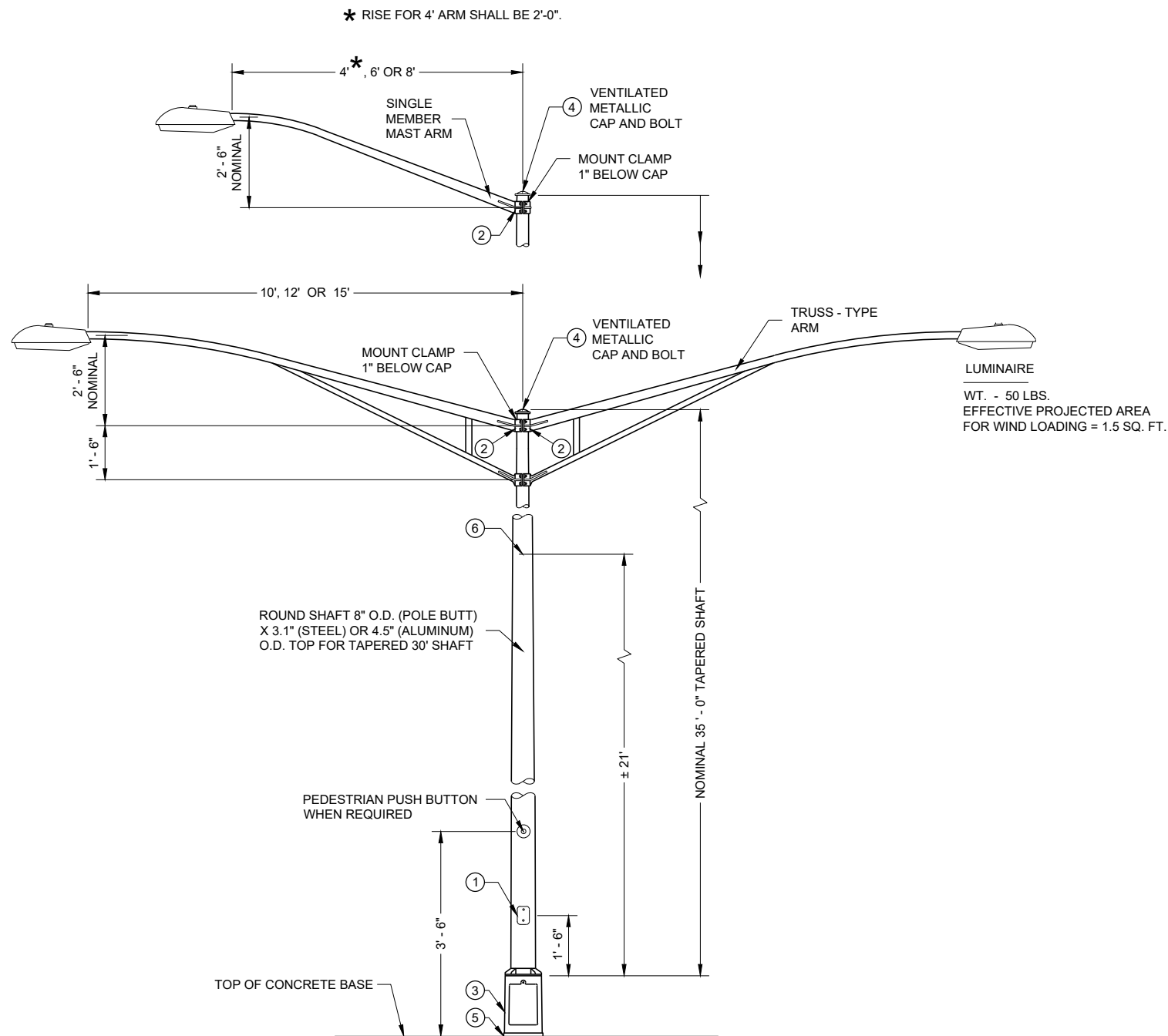


INTERCHANGEABLE MOUNTING DETAIL

**POLE MOUNTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 09E01-e Pole Mountings for Lighting Units, Type 6 (35 feet)



**TYPE 6 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY**

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 6 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 6 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVEING INSIDE THE POLE IS NOT ACCEPTABLE.

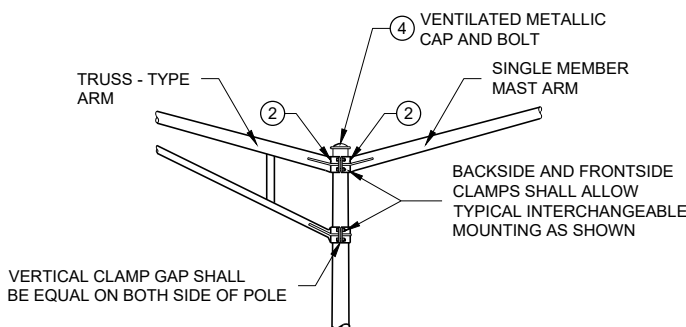
TYPE 6 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.219".

TYPE 6 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

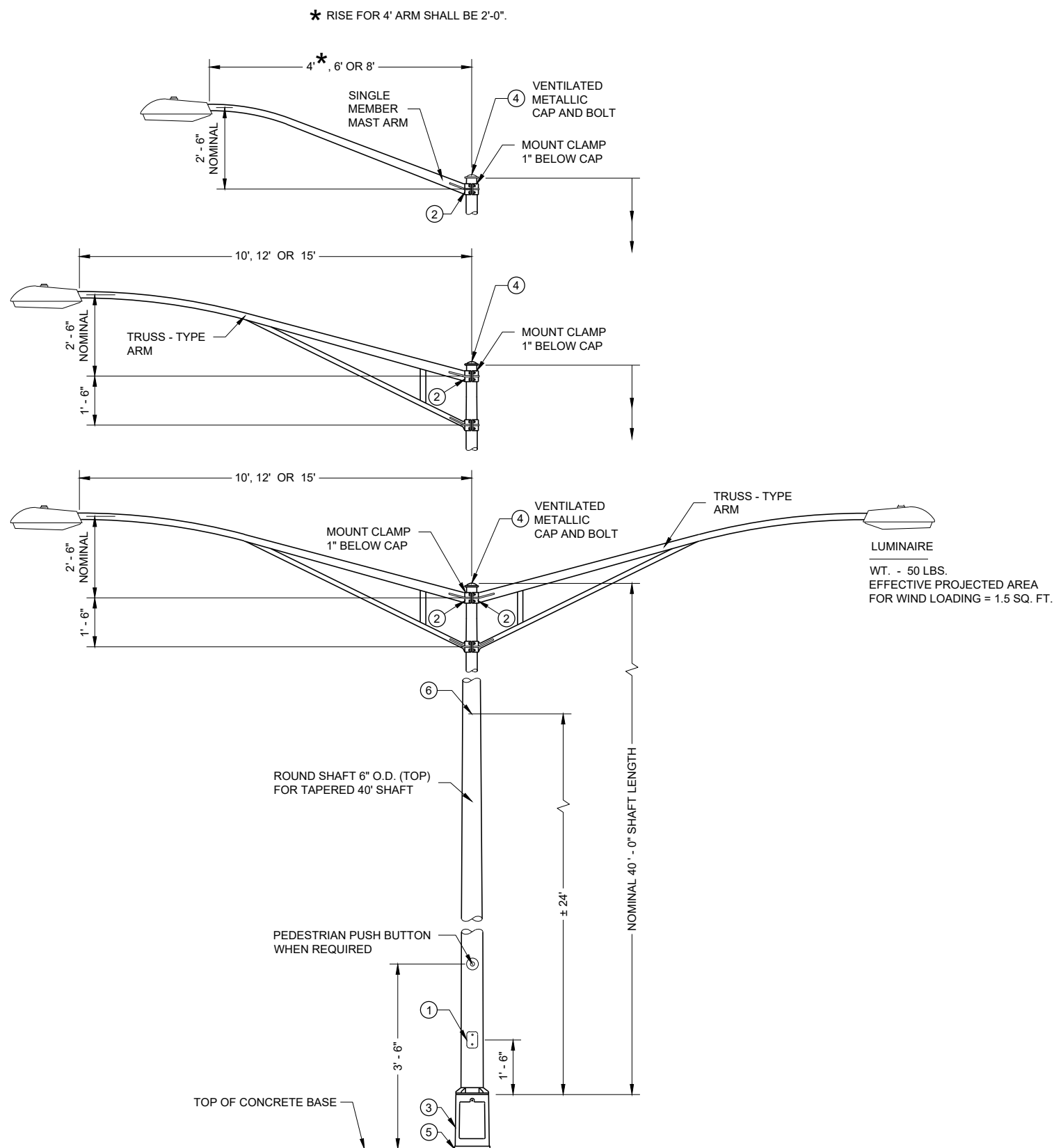
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 3/4" X 3/4" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 3/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



INTERCHANGEABLE MOUNTING DETAIL

**POLE MOUNTINGS FOR
LIGHTING UNITS, TYPE 6
(35 FEET)**

SDD 09E01-f Pole Mountings for Lighting Units, Type 17 (40 feet)



**TYPE 17 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY**

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL LUMINAIRE POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 17 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

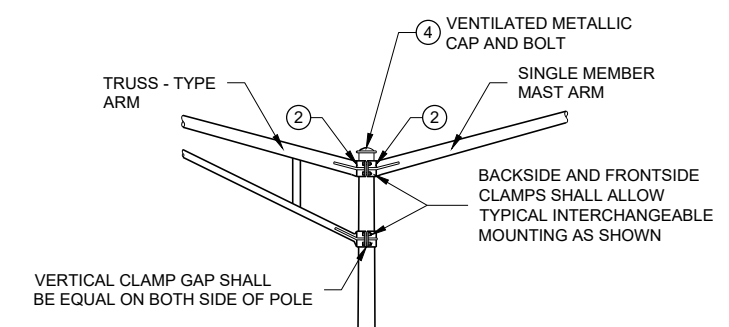
TYPE 17 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SHOE BASE SHALL BE SLOTTED TO ACCEPT A 15" BOLT CIRCLE (14" X 16" SLOT) USING 1" ANCHOR RODS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

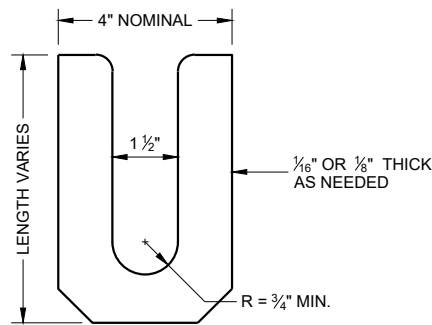
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 3/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 1/2" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM FHWA APPROVED TRANSFORMER BASE WHEN REQUIRED, SHALL HAVE AN ULTIMATE STATIC LOAD STRENGTH OF AT LEAST 40,000 FT. - LBS.
- ④ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 3/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



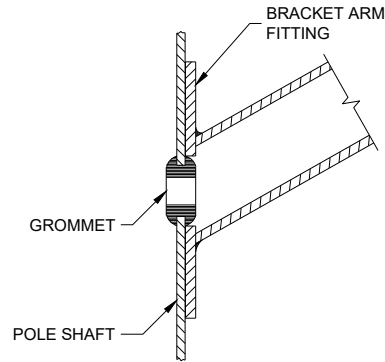
INTERCHANGEABLE MOUNTING DETAIL

**POLE MOUNTINGS FOR
LIGHTING UNITS, TYPE 17
(40 FEET)**

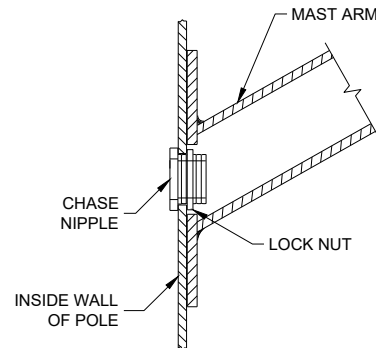
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 80



LEVELING SHIM
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



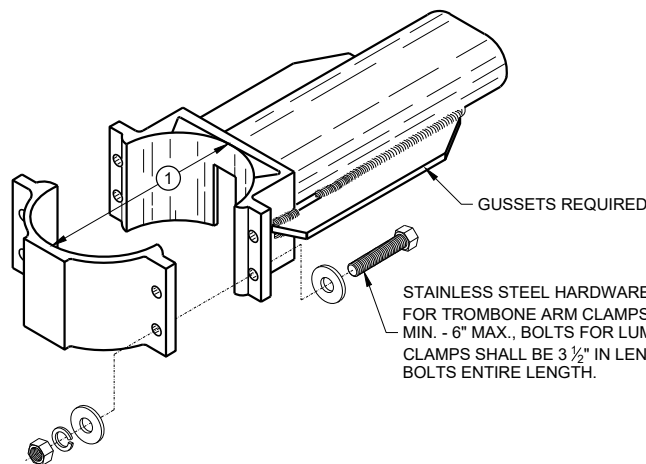
TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

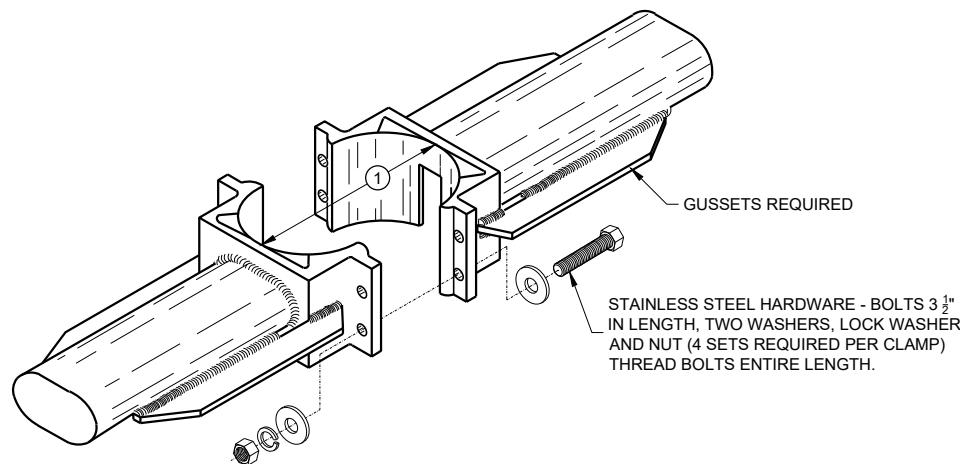
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

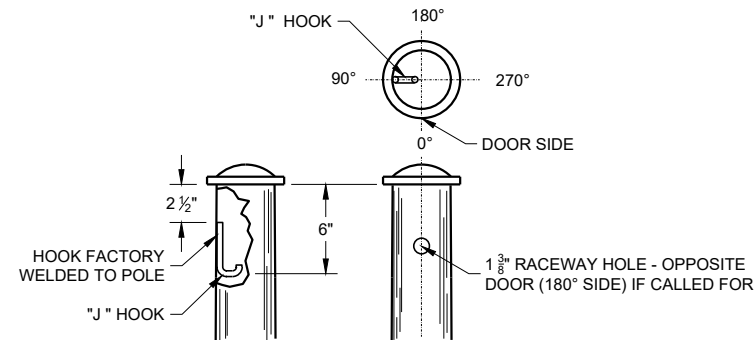
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



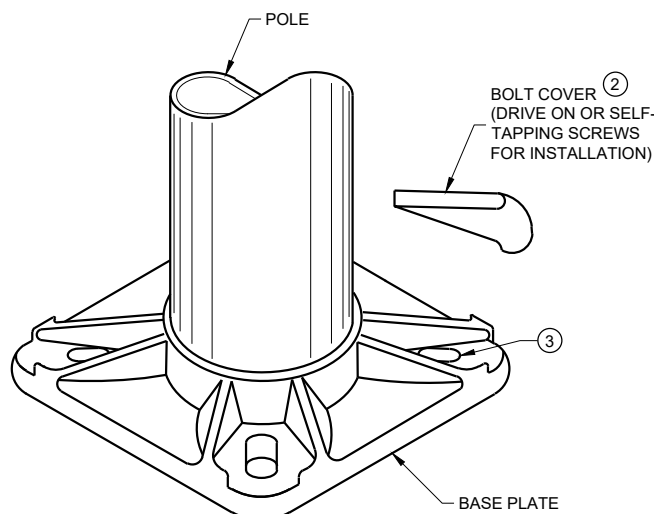
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



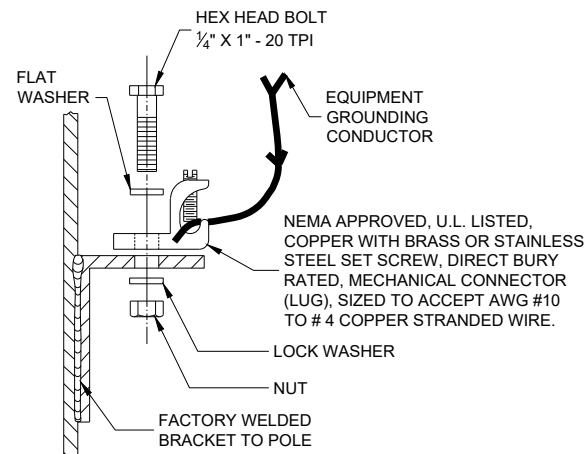
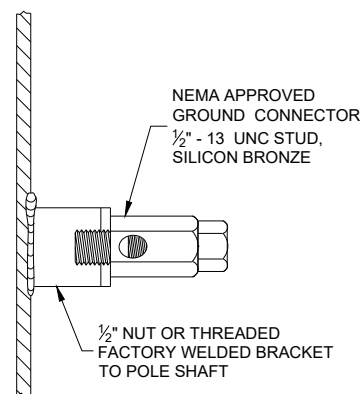
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS



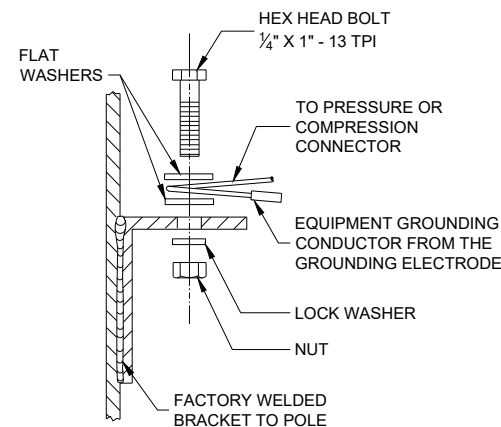
TYPICAL "J" HOOK LOCATION



BASE PLATE



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



HARDWARE DETAILS FOR POLE MOUNTING

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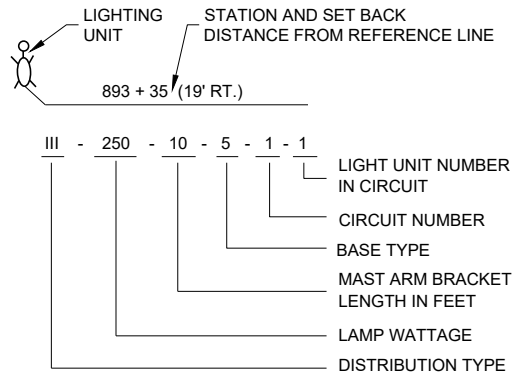
APPROVED
November 2018 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

GENERAL NOTES

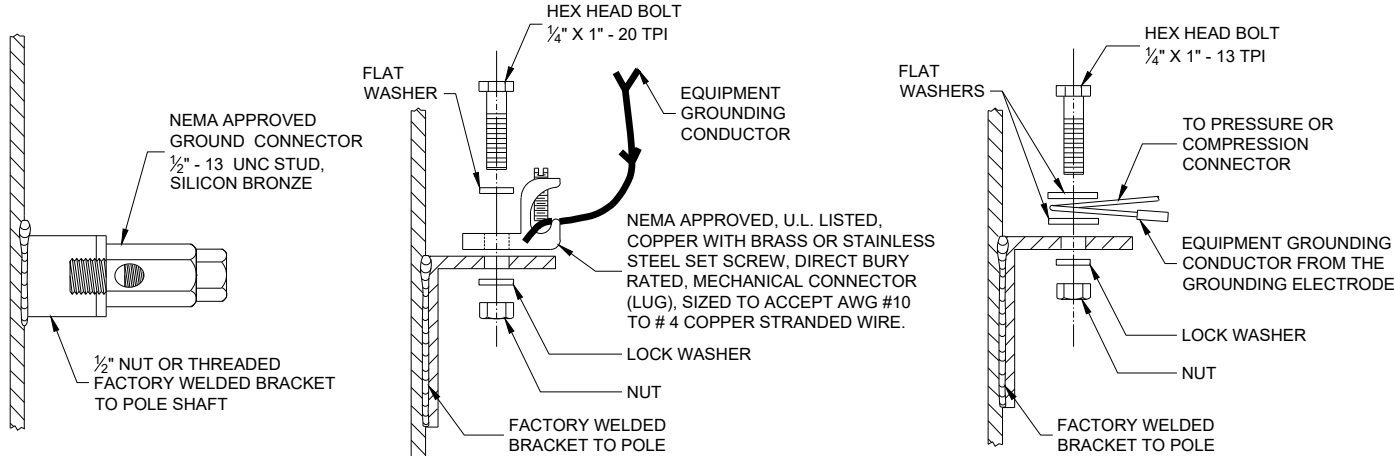
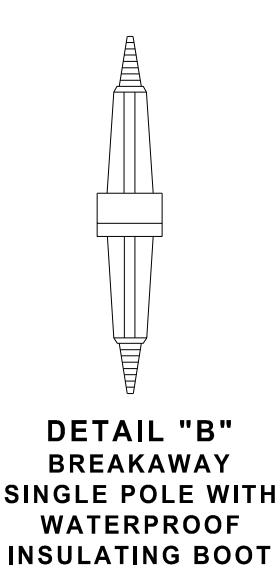
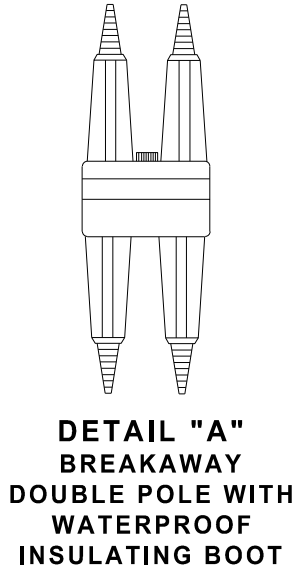
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



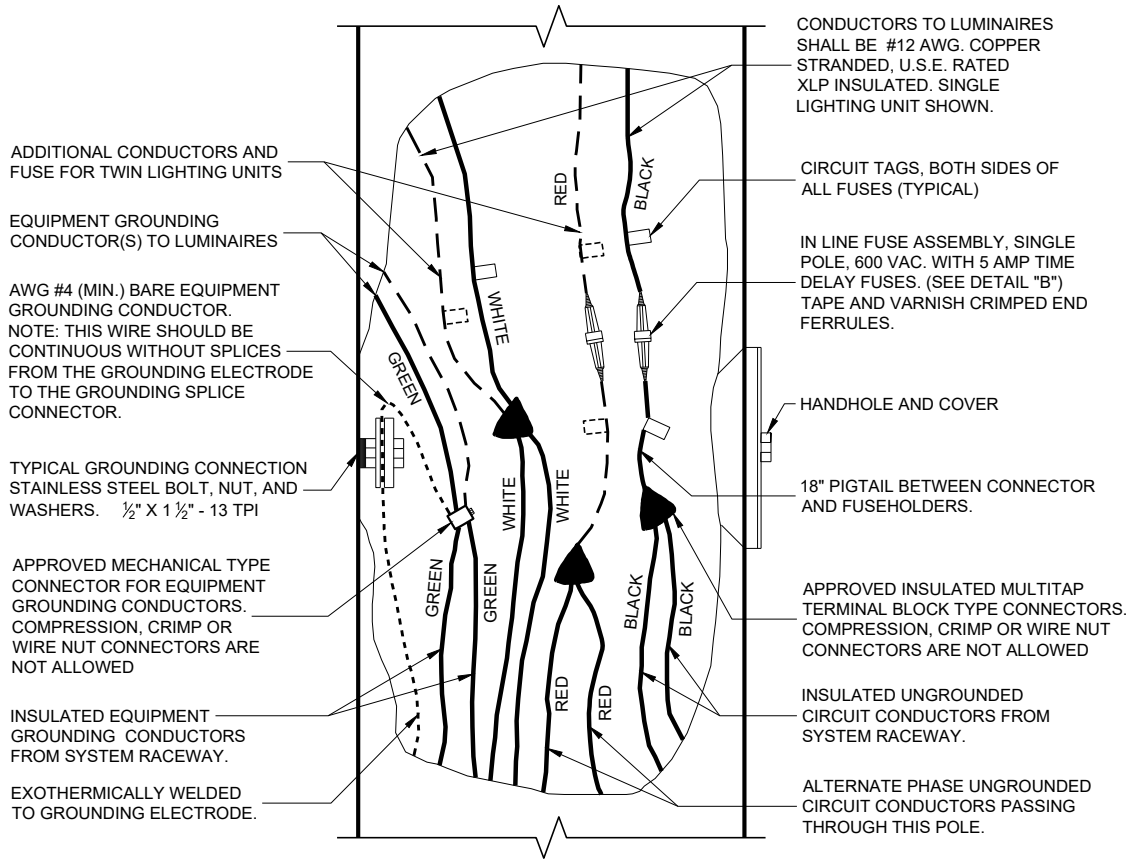
LIGHTING UNIT CODE (TYPICAL)



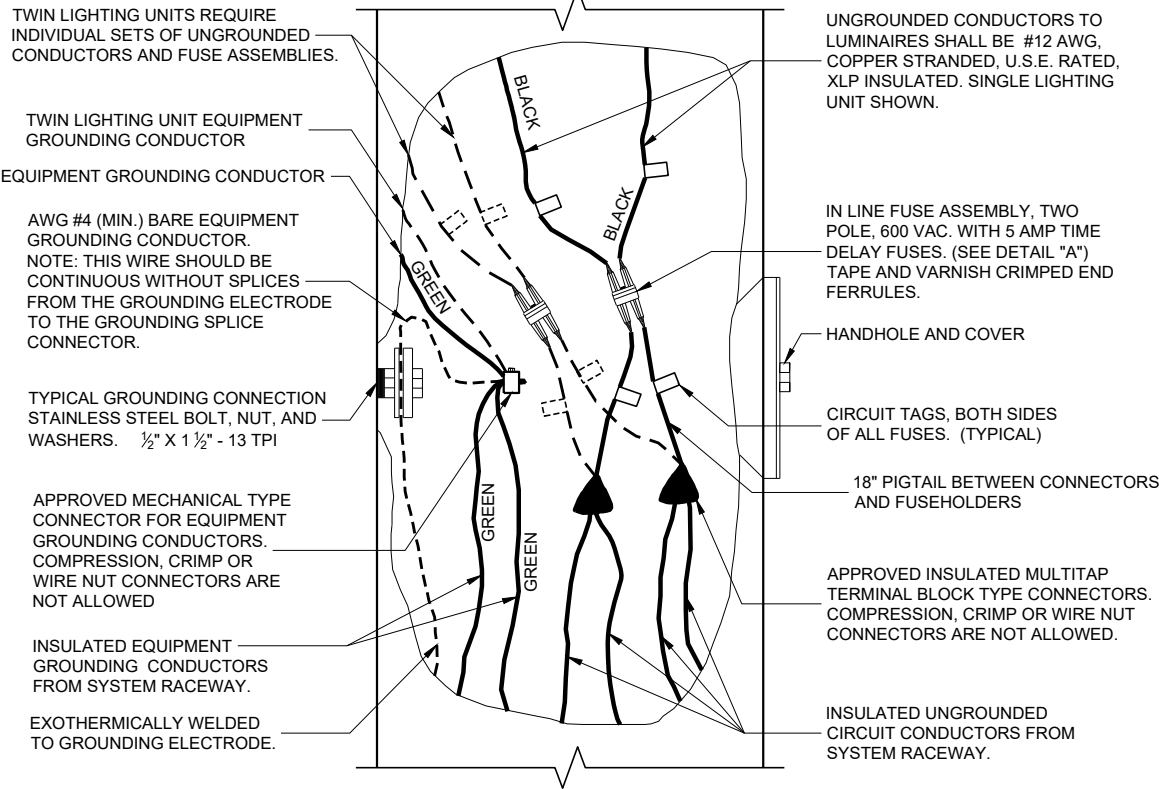
TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

6



3 WIRE - 120, 240 OR 480 VAC (UNGROUND ED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUND ED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

6

NON - FREEWAY LIGHTING UNIT POLE WIRING

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SDD 9e5 Traffic Signal Standard Ornamental Bracket Mountings (Typical) for 13 ft. or 15 ft.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SEE THE SIGNAL PLAN FOR REQUIRED SIGNAL FACE SIZES.

ALL PEDESTAL BASES SHALL BE MOUNTED ON CONCRETE BASE - TYPE 1.

FOR APPROVED MOUNTING HARDWARE, SEE THE CONTRACT SPECIAL PROVISIONS.

POLE CLAMP (AS SHOWN) MOUNTING BRACKETS SHALL BE USED.

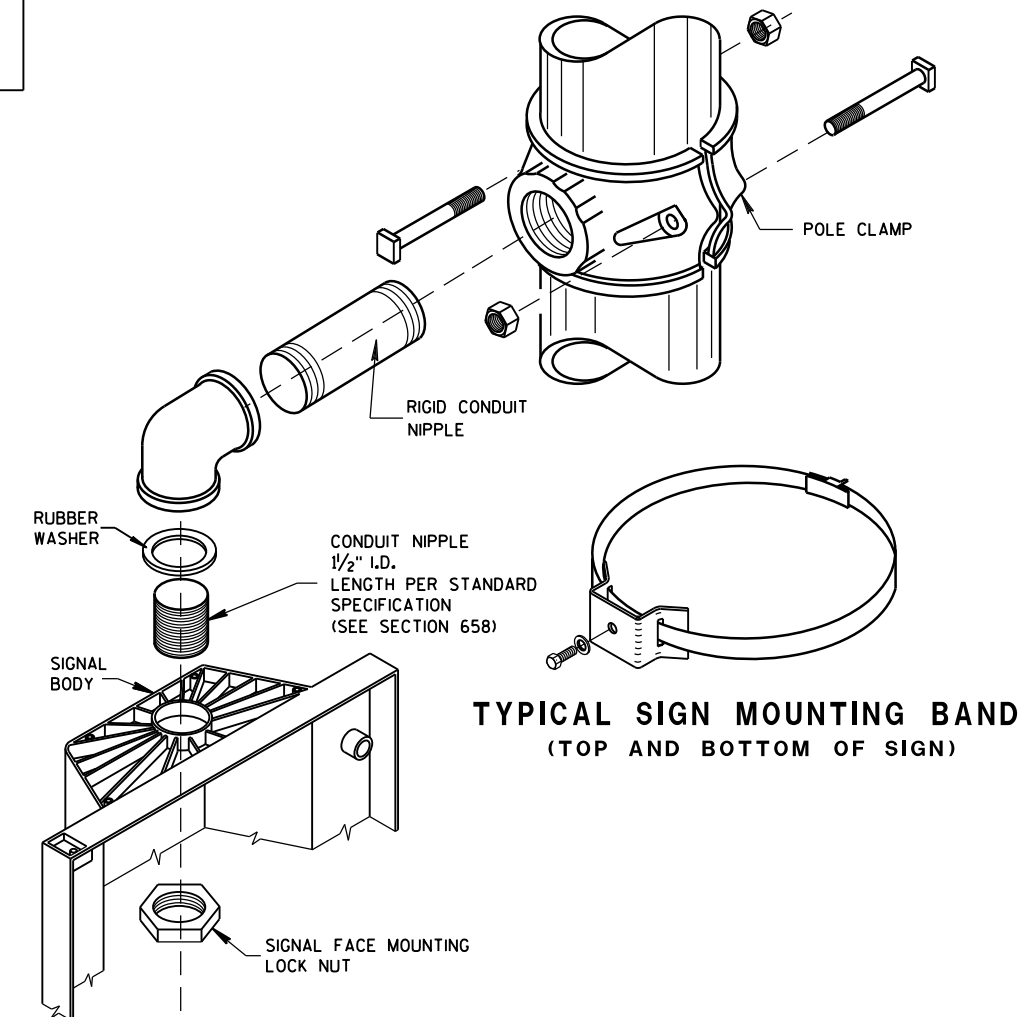
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE REGION TRAFFIC ENGINEER.

FOLDING STOP SIGNS SHALL BE IN ACCORDANCE WITH THE MUTCD AND/OR THE LATEST WISCONSIN SUPPLEMENT. THE SIGNS SHALL BE SIZED AND LOCATED AS CALLED FOR IN THE PLANS.

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



SIGNAL FACE MOUNTING DETAIL
(ORNAMENTAL)

TRAFFIC SIGNAL STANDARD-15 FT.

TRAFFIC SIGNAL STANDARD-13 FT.

TRAFFIC SIGNAL STANDARD-15 FT.
3M MOUNTING (TYPICAL)

**TRAFFIC SIGNAL STANDARD
ORNAMENTAL BRACKET MOUNTINGS
TYPICAL FOR 13 FT. OR 15 FT.**

STATE OF WISCONSIN
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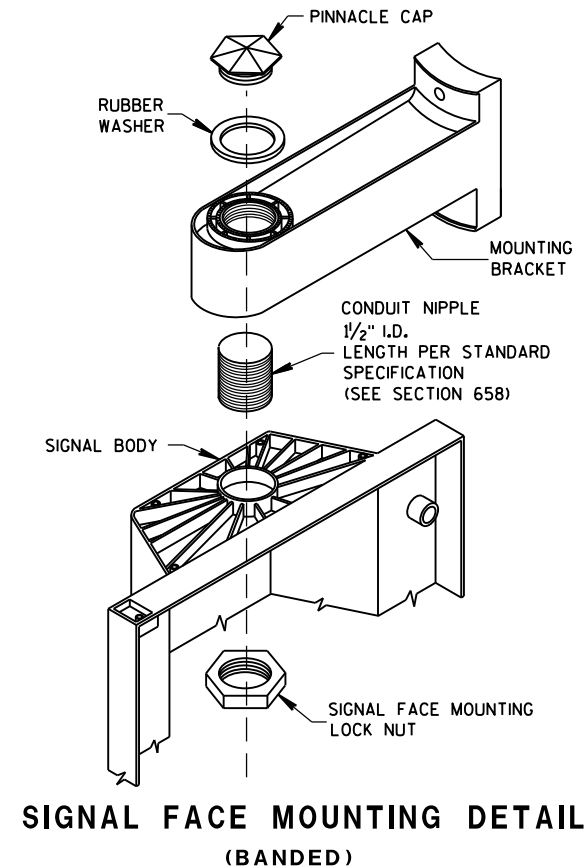
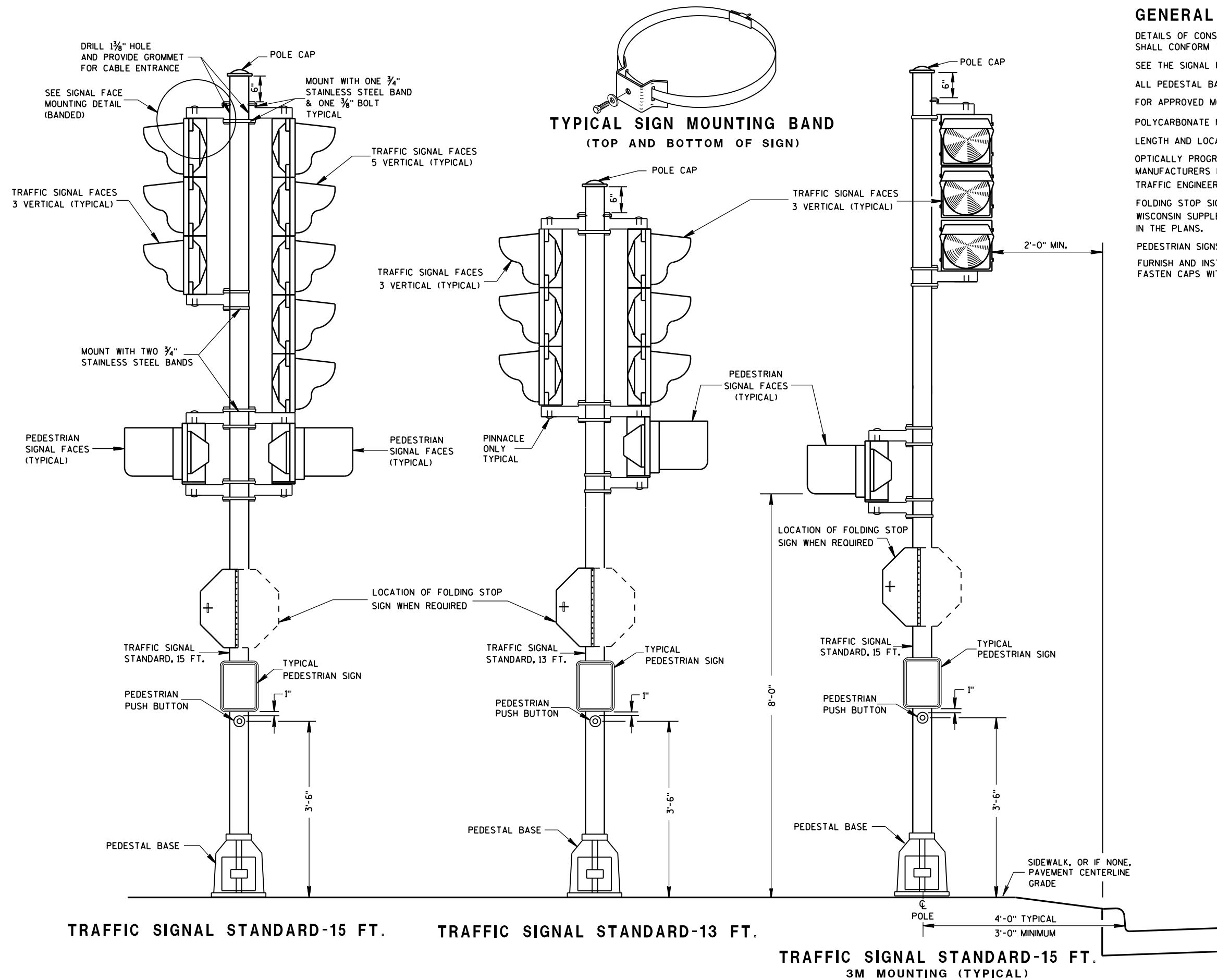
APPROVED
2/28/2013
DATE
FHWA

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STATE ELECTRICAL ENGINEER

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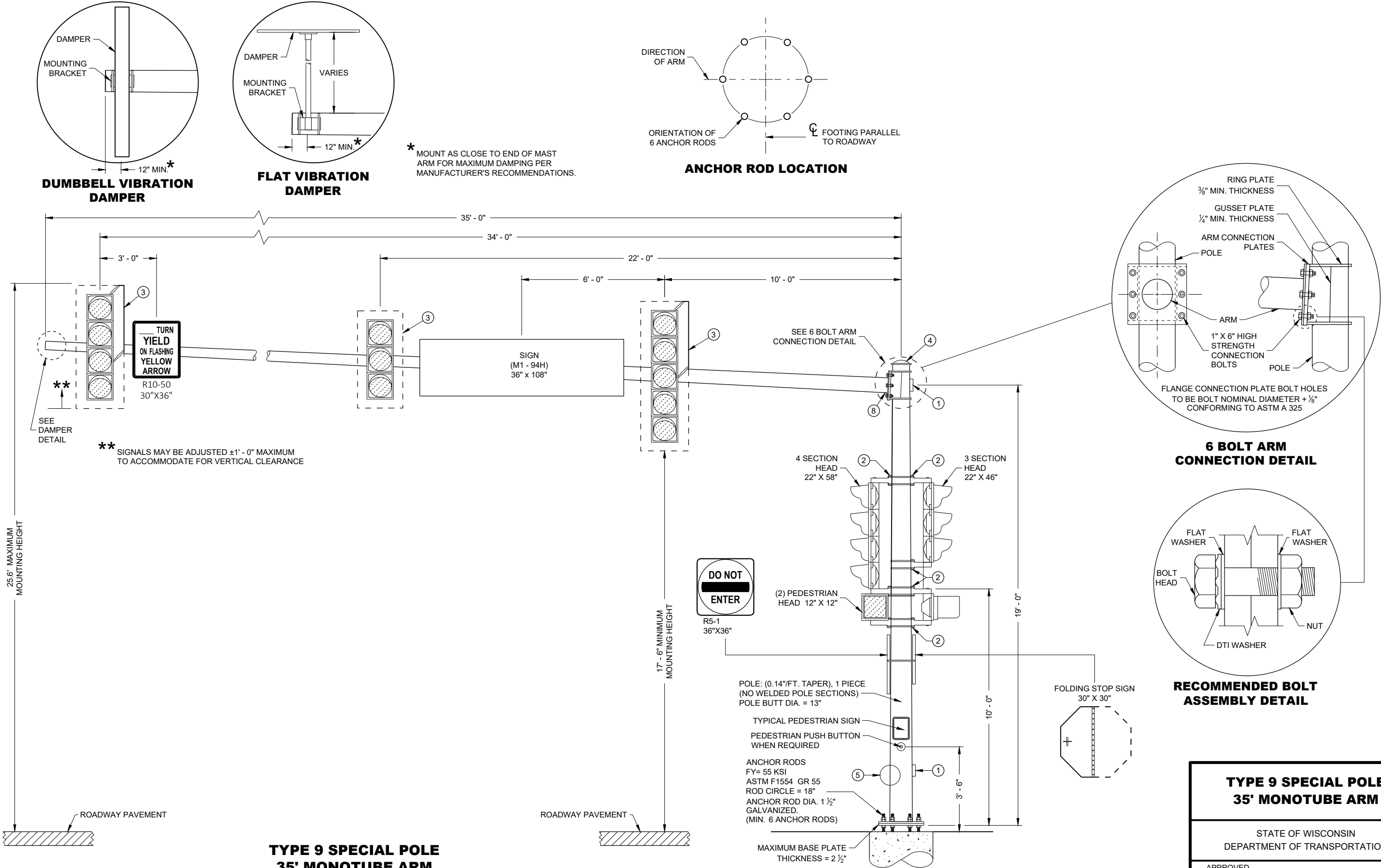


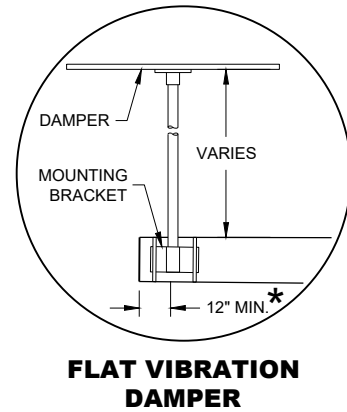
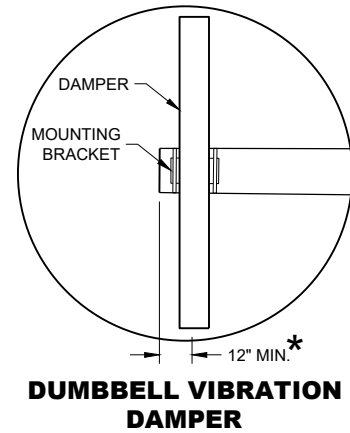
SDD 9e6 Traffic Signal Standard Poly Bracket Mountings (Typical) 13 ft. or 15 ft.



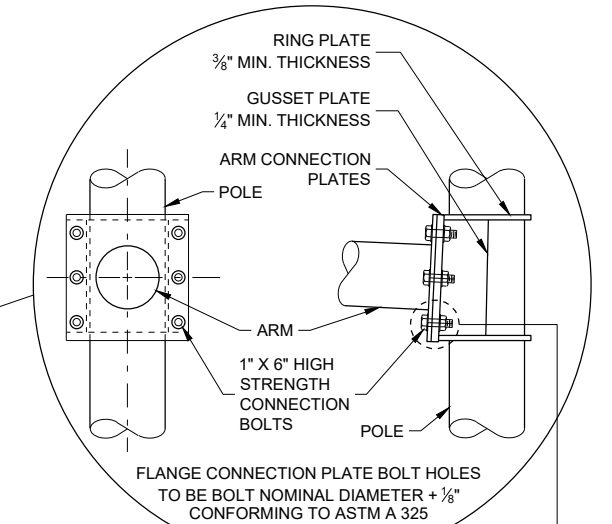
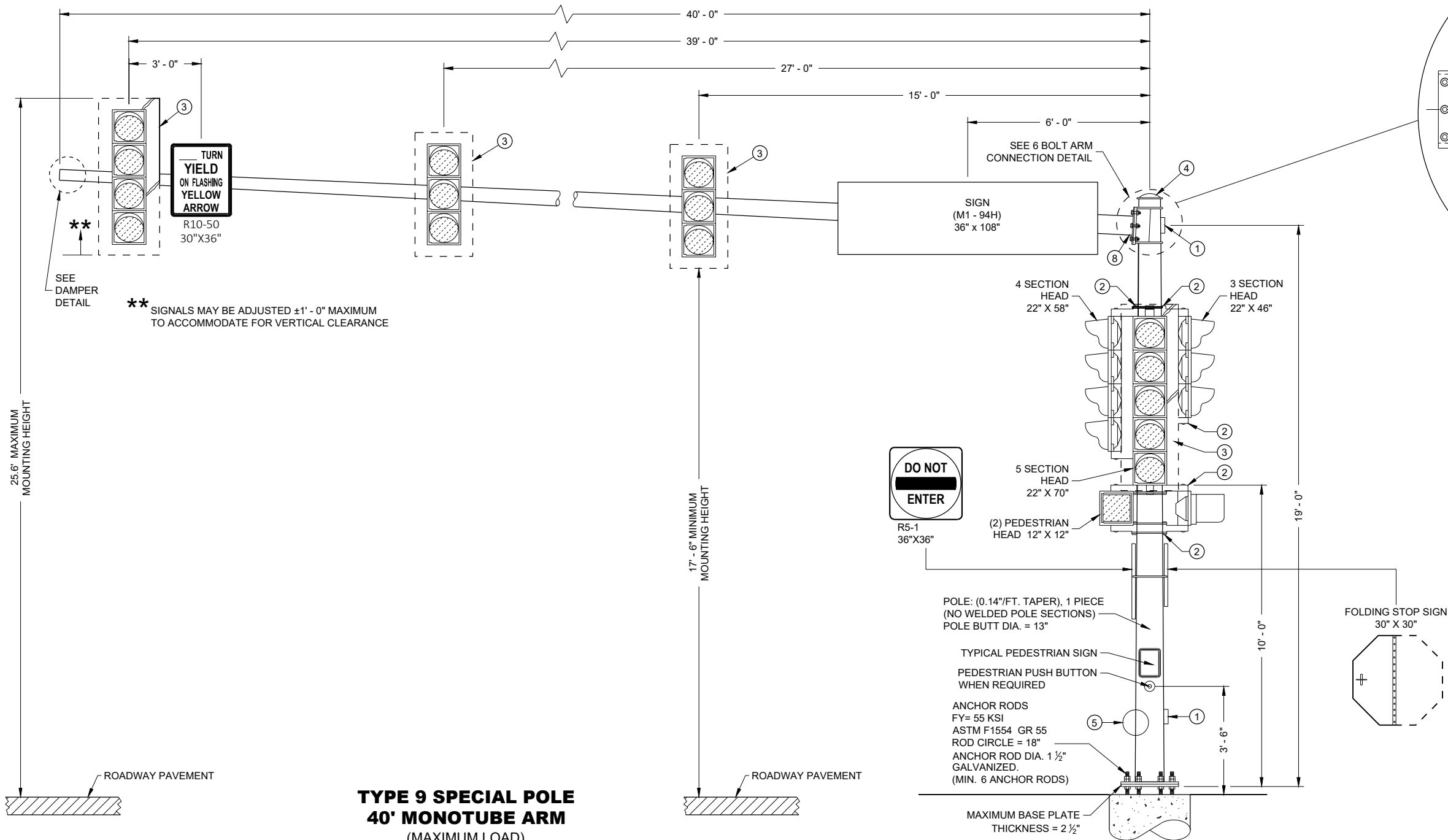
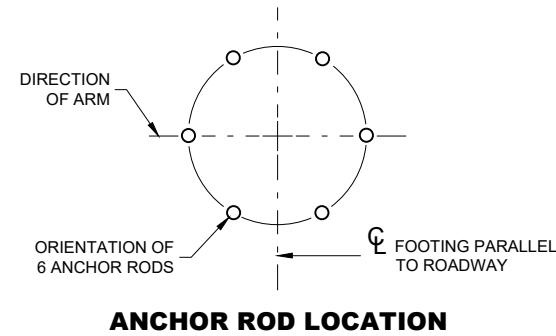
TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED 2/28/2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER	84
FHWA		



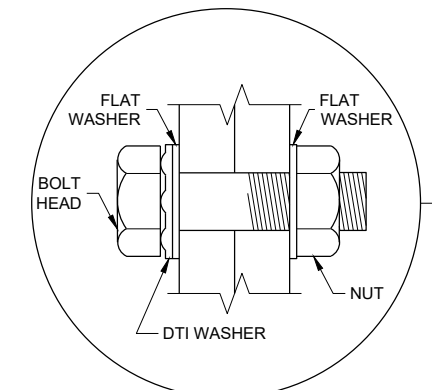




* MOUNT AS CLOSE TO END OF MAST ARM FOR MAXIMUM DAMPING PER MANUFACTURER'S RECOMMENDATIONS.



6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

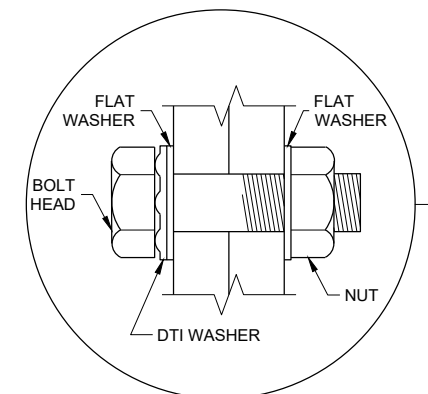
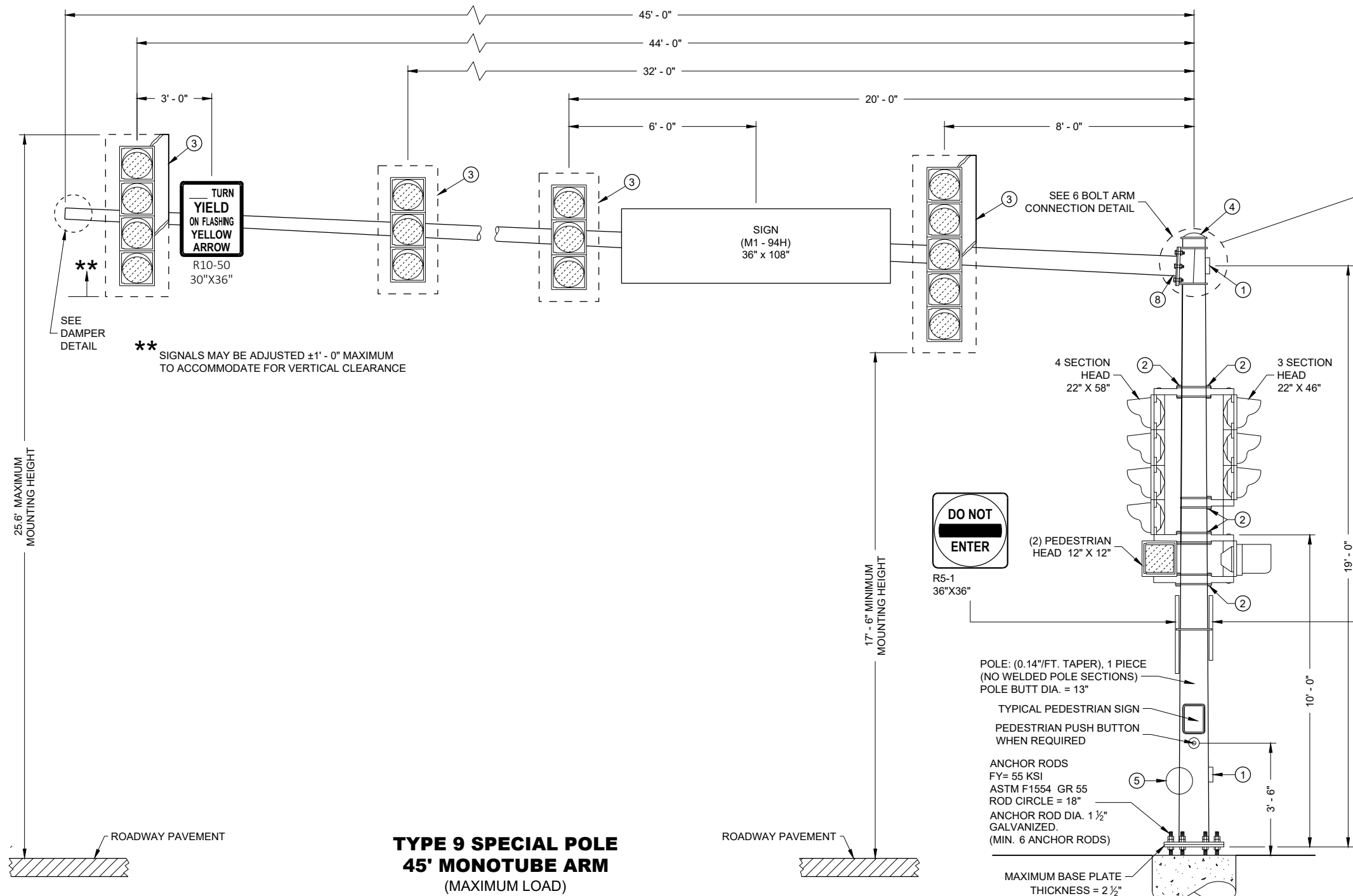
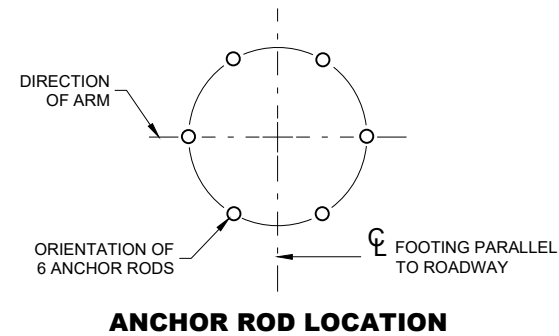
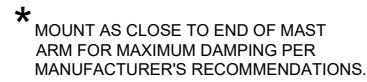
TYPE 9 SPECIAL POLE 40' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

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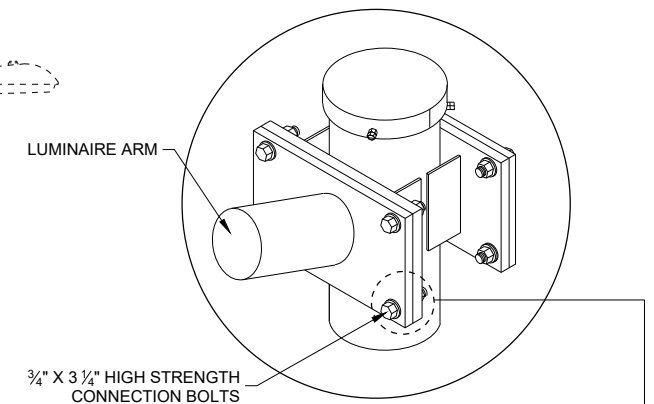
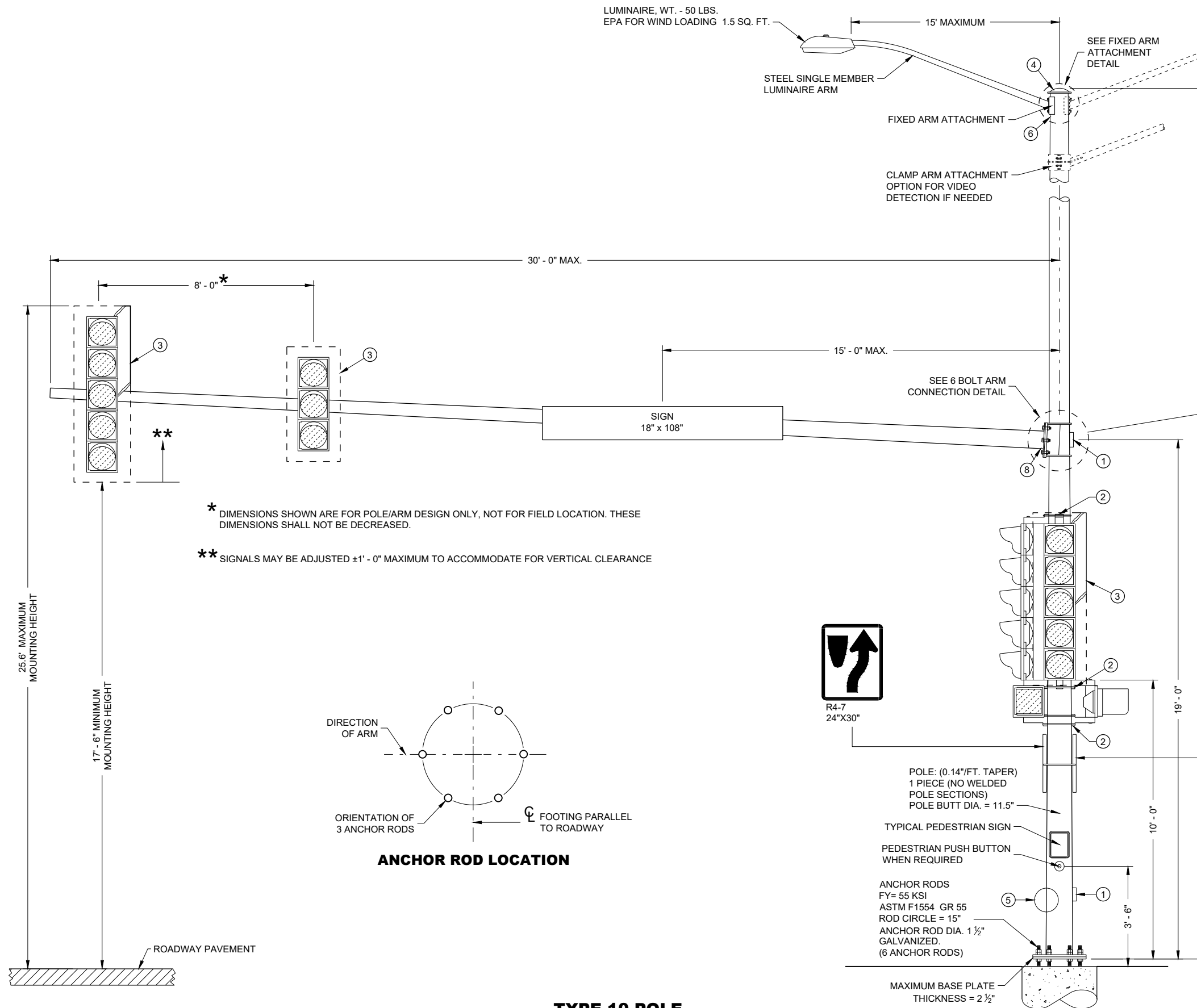
RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 9 SPECIAL POLE 45' MONOTUBE ARM

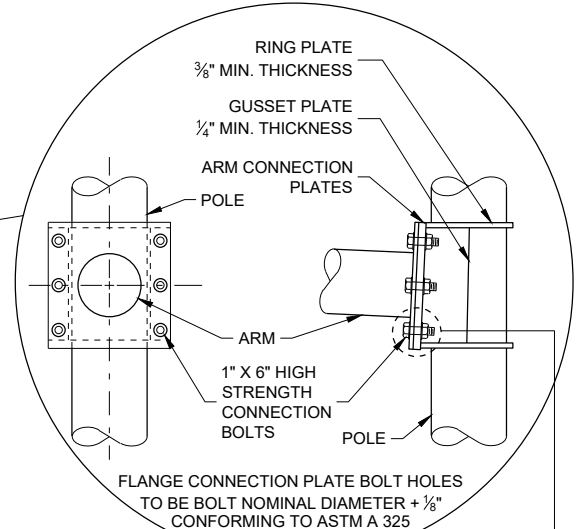
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 88
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 DATE STATE ELECTRICAL ENGINEER

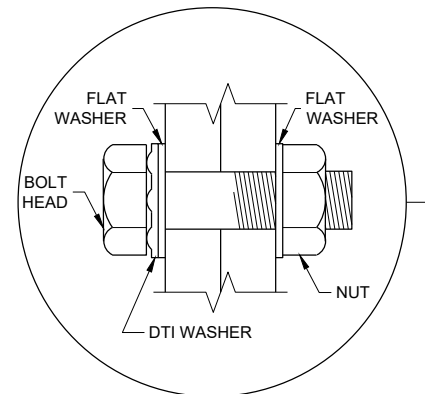
SDD 09E08-e Type 10 Pole, 15' - 30' Monotube Arm



FIXED ARM ATTACHMENT DETAIL



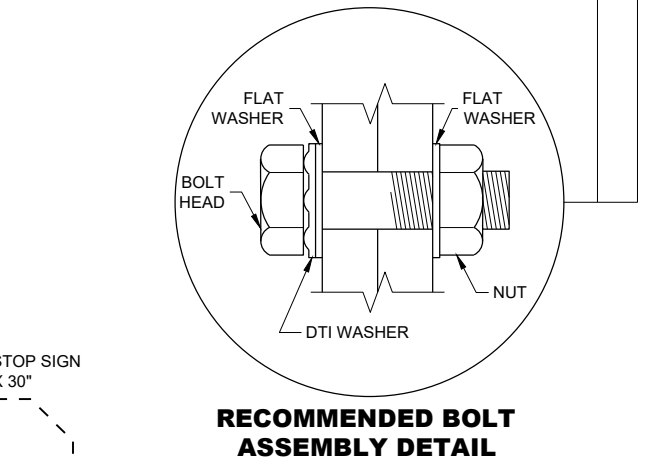
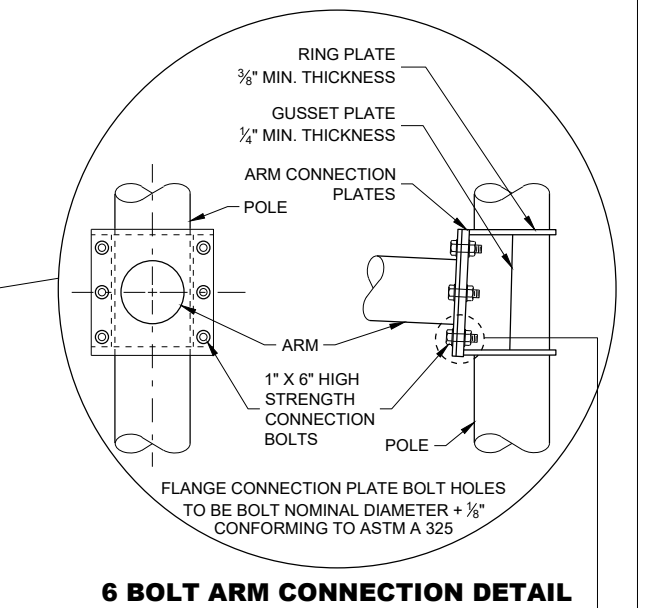
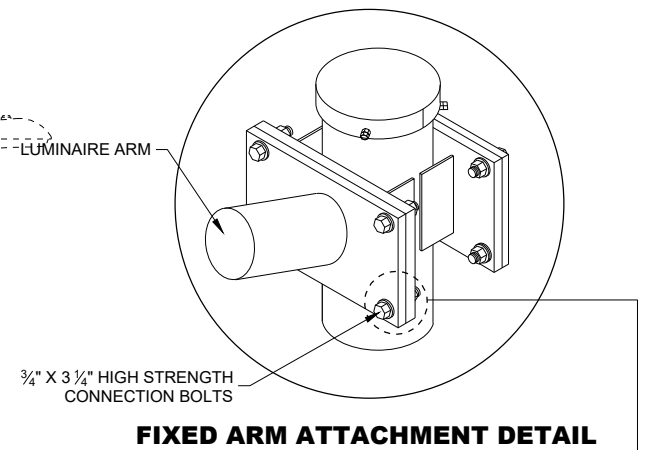
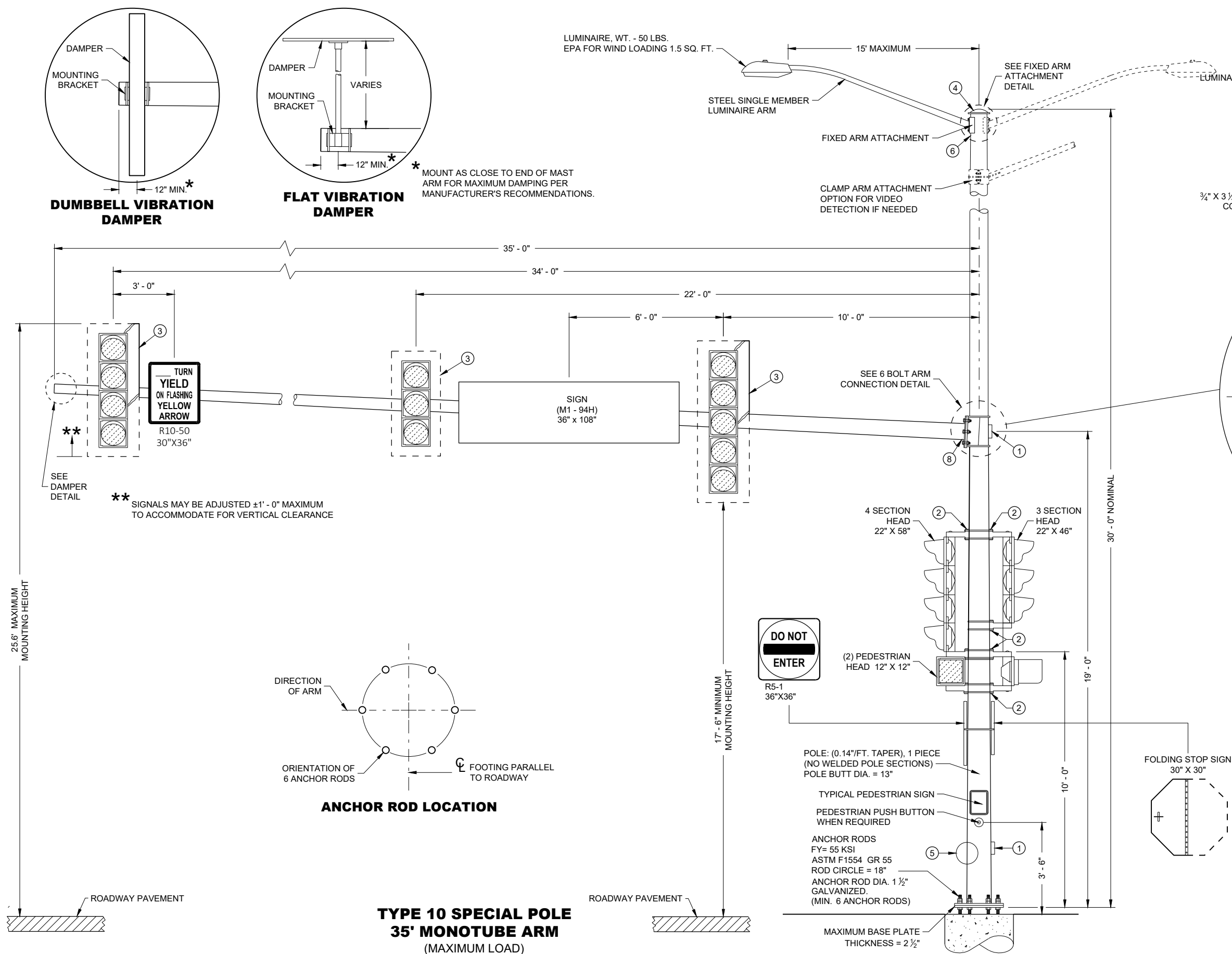
6 BOLT ARM CONNECTION DETAIL



RECOMMENDED BOLT ASSEMBLY DETAIL

TYPE 10 POLE 15' - 30' MONOTUBE ARM	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED August 2020 DATE	/S/ Ahmet Demirelek STATE ELECTRICAL ENGINEER
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SDD 09E08 - 09f



TYPE 10 SPECIAL POLE 35' MONOTUBE ARM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

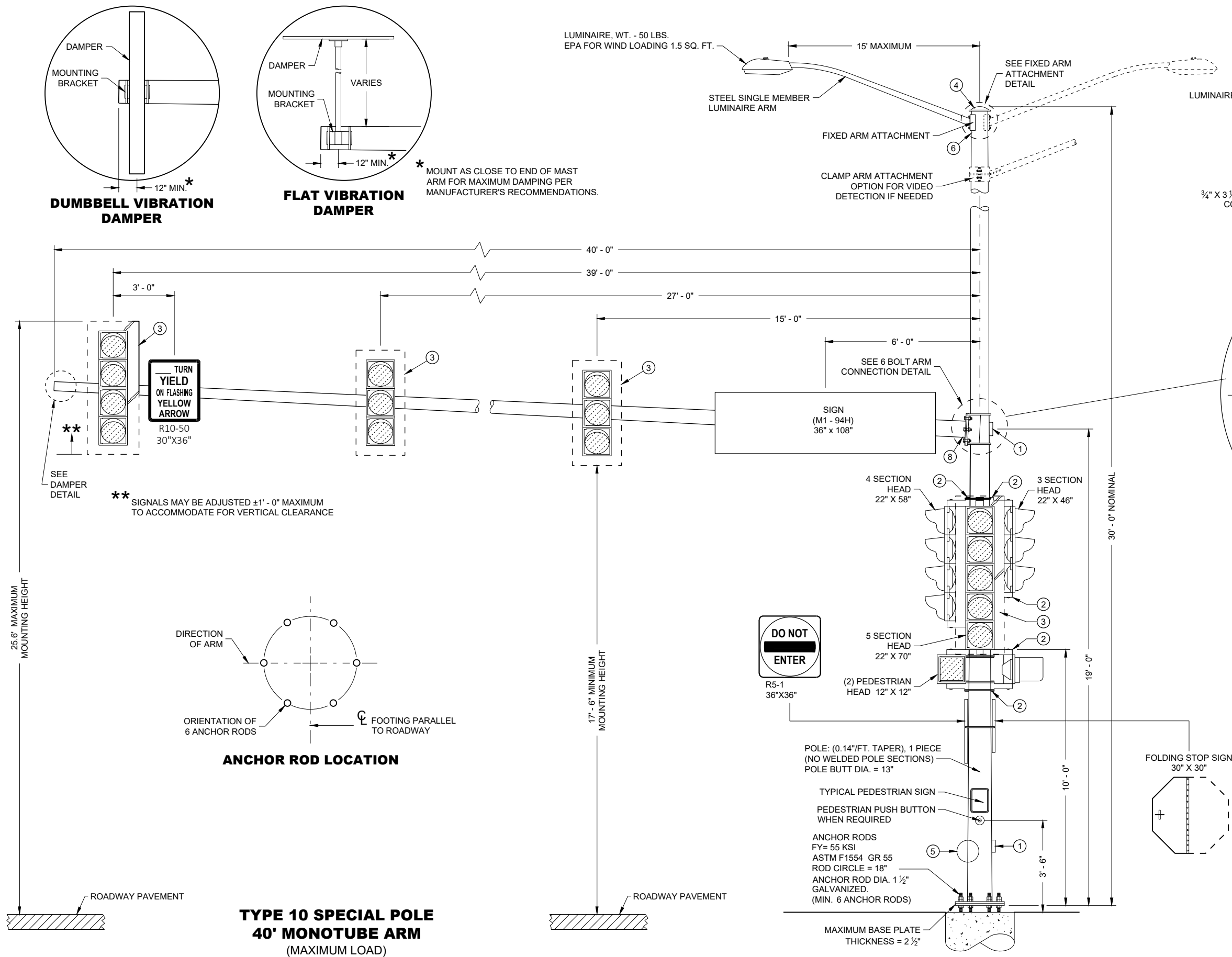
APPROVED
August 2020
DATE

/S/ Ahmet Demirbilek
SEAL ELECTION ENGINEER

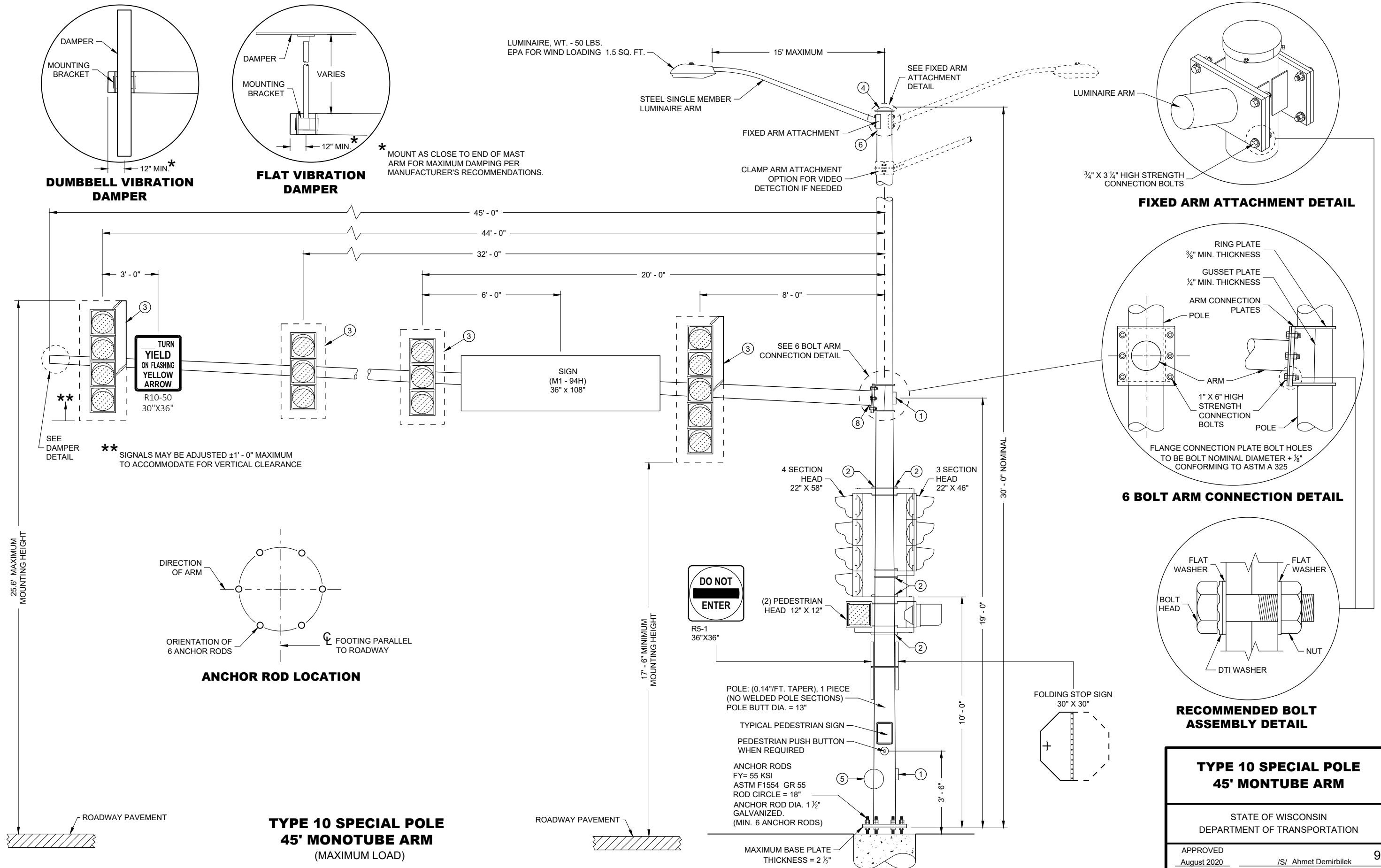
9

6

SDD 09E08 - 09f



SDD 09E08-h Type 10 Special Pole, 45' Monotube Arm

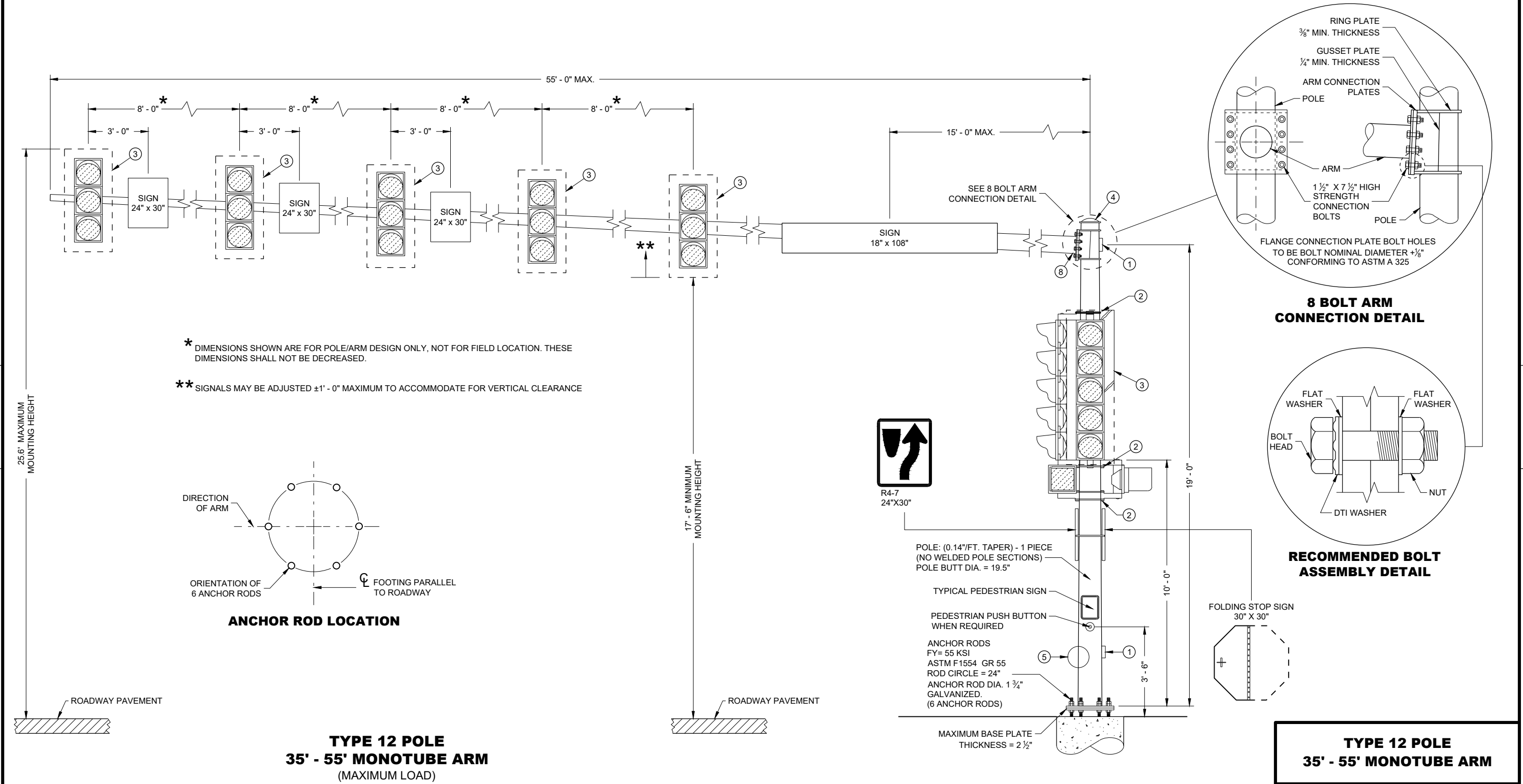


TYPE 10 SPECIAL POLE 45' MONTUBE ARM

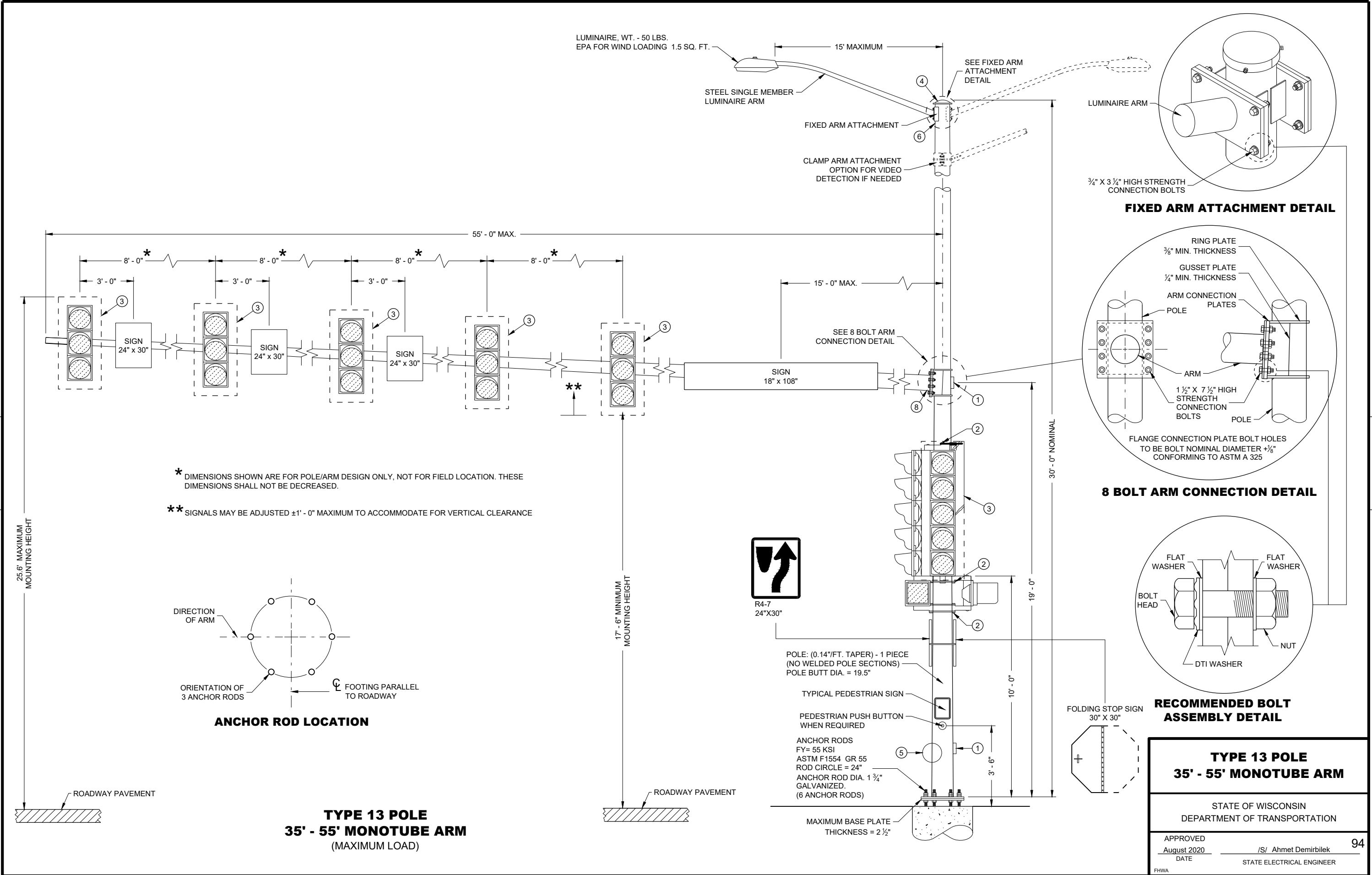
STATE OF WISCONSIN
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APPROVED
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DATE STATE ELECTRICAL ENGINEER

SDD 09E08-i Type 12 Pole, 35' - 55' Monotube Arm



SDD 09E08-j Type 13 Pole, 35' - 55' Monotube Arm



SDD 09E08-k General Notes and Hardware Details for Type 9, 10, 9/10 Special, 12, and 13 Poles with Monotube Arms

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE TYPES 9 AND 10 ARE FOR ARM LENGTHS 15 FOOT TO 30 FOOT.

POLE TYPES 9 SPECIAL AND 10 SPECIAL ARE FOR ARM LENGTHS 35 FOOT, 40 FOOT, AND 45 FOOT.

POLE TYPES 12 AND 13 ARE FOR ARM LENGTHS 35 FOOT TO 55 FOOT.

MONOTUBE POLES AND ARMS SHALL BE GALVANIZED STEEL.

RING STIFFENED BUILT UP BOX TYPE OF ATTACHMENT FOR TRAFFIC SIGNAL ARM.

ONE PIECE POLE CONSTRUCTION (NO WELDED POLE SECTIONS).

STANDARD STRAIGHT ARM DESIGN (3% ± RISE).

SECTION 657, POLES OF THE STANDARD SPECIFICATION SHALL APPLY TO THIS DRAWING.

PROVIDE WIREWAY THRU POLE WALL AND ARM CONNECTION PLATES. PROVIDE ROUND, SMOOTH INSIDE SURFACE.

MANUFACTURER'S SUBMITTED POLE DESIGNS AND DRAWINGS SHALL BE SIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED AS BEING IN COMPLIANCE WITH THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNAL 2015 1ST EDITION (INCLUDING INTERIM REVISIONS)" AND ALL PERTINENT WISDOT SPECIFICATIONS AND DRAWINGS FOR THE LIGHTING STRUCTURES AS FOLLOWS:

CATEGORY III FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 AND TYPE 10 STRUCTURES.

CATEGORY II FATIGUE LOADS OF TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 9 SPECIAL AND TYPE 10 SPECIAL STRUCTURES. IN LIEU OF DESIGNING FOR GALLOPING, A VIBRATION DAMPER MITIGATION DEVICE IS REQUIRED TO BE SUPPLIED AND INSTALLED AT THE END OF THE MAST ARM.

CATEGORY II FATIGUE FATIGUE LOADS OF GALLOPING, TRUCK GUSTS (AT 45 MPH VEHICLE VELOCITY) AND NATURAL WIND GUSTS FOR DESIGN OF TYPE 12 AND TYPE 13 STRUCTURES.

115 MPH (700 YEAR MRI BASIC WIND SPEED).

SECURE THE OPENING BELOW THE BASE PLATE WITH STAINLESS STEEL OR GALVANIZED STEEL MESH AND SECURE THE MESH WITH 3/4" STAINLESS STEEL BANDING AROUND THE LEVELING NUTS.

INDENT PRINT (NOMINAL 1/2" HIGH) THE POLE LENGTH AND FIRST TWO LETTERS OF THE MANUFACTURERS NAME ON TWO SIDES OF THE BASE PLATE 180 DEGREES APART, BEFORE GALVANIZING. THE ARM SHALL BE IDENTIFIED WITH THE SAME INFORMATION BY INDENT PRINT.

SIGNAL FACE SHALL BE MOUNTED 6 INCHES (NOMINAL) FROM THE END OF THE MONOTUBE ARM OR AS SHOWN ON THE PLAN CONSTRUCTION DETAIL OR A S DIRECTED BY THE PROJECT ENGINEER/ELECTRICAL OPERATIONS PERSONNEL. MOUNT ALL LIKE HEAD AT SAME ELEVATION.

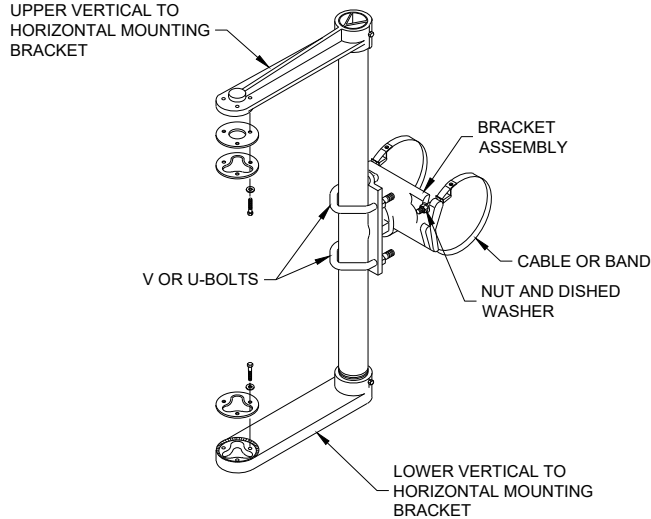
SIGN MOUNTING BRACKETS SHALL BE FURNISHED IN ACCORDANCE WITH SECTION 637 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

- DESIGN FOR MAXIMUM ALLOWABLE HAND HOLE WITH COVER ASSEMBLY WITH TWO 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLTS.
- SIGNAL MOUNTING BRACKETS FOR POLE MOUNTING, MOUNT WITH CAP SCREW AND BANDING (SEE SPECIFICATION SECTION 658).
- SECURELY MOUNT BACK PLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURERS RECOMMENDATIONS.
- THE TOP OF THE POLE SHAFT AND THE MONOTUBE ARM SHALL BE EQUIPPED WITH A REMOVABLE, VENTILATED CAP HELD SECURELY IN PLACE WITH SET SCREWS.
- FACTORY WELDED BRACKET FOR GROUNDING LUG, OPPOSITE HAND HOLD, (LUG AND HARDWARE PAID UNDER SEPARATE ITEM). PROVIDE HOLE IN BRACKET FOR 1/4" X 3/4" - 20 TPI STAINLESS STEEL HEX HEAD BOLT.
- FACTORY WELDED "J" HOOK FOR STRAIN RELIEF FOR POLE LUMINAIRE WIRE.
- INSTALL STRUCTURAL IDENTIFICATION PLAQUES.

STRUCTURAL IDENTIFICATION PLAQUES SHALL BE PLACED ON THE POLES IN THE SAME DIRECTION AS THE ARM.

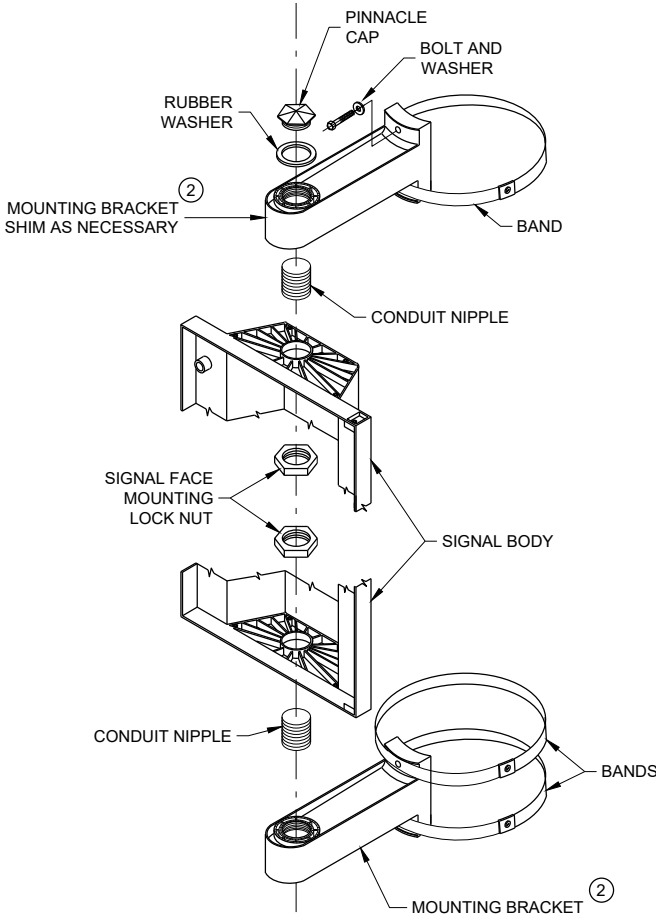
MOUNTING HEIGHT SHALL BE 6' - 0" ABOVE THE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL BE OBSTRUCTED.

- FACTORY DRILLED 1/2" DRAIN HOLE 2" FROM FLANGE CONNECTION PLATE.

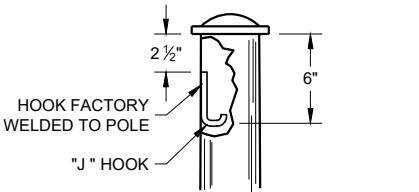


SIGNAL FACE MOUNTING BRACKET DETAIL FOR MONOTUBE ARM

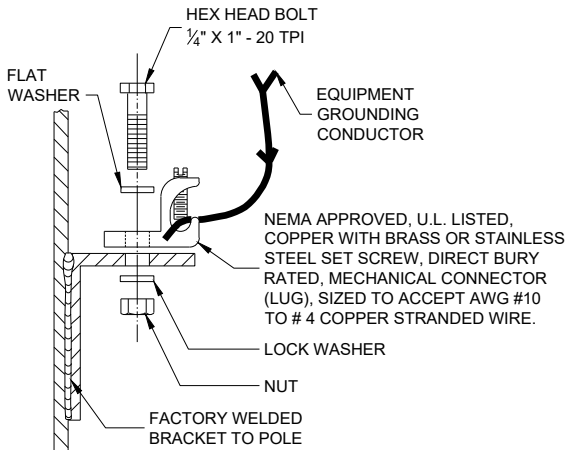
(MOUNT PER MANUFACTURER'S RECOMMENDATION)



SIGNAL FACE VERTICAL MOUNTING DETAIL

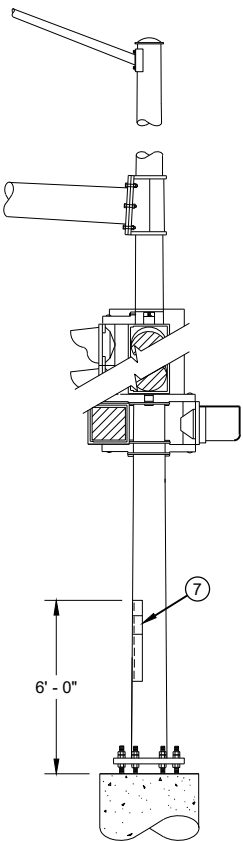


TYPICAL "J" HOOK WIRE SUPPORT



TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



STRUCTURAL IDENTIFICATION PLAQUE PLACEMENT

GENERAL NOTES AND HARDWARE FOR TYPES 9,10, 9/10 SPECIAL, 12 AND 13 POLES WITH MONOTUBE ARMS

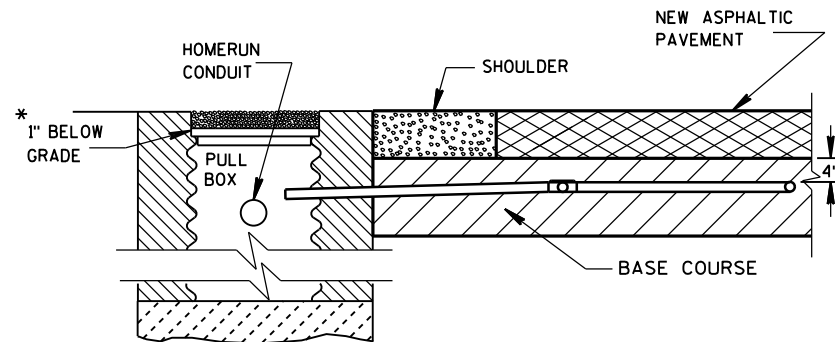
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL
FHWA ENGINEER

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SDD 9f8 Loop Detector Placed in Crushed Aggregate Base (New Asphaltic Pavement)



SECTION A-A
NO CURB & GUTTER

DETECTOR LOOP INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD-OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

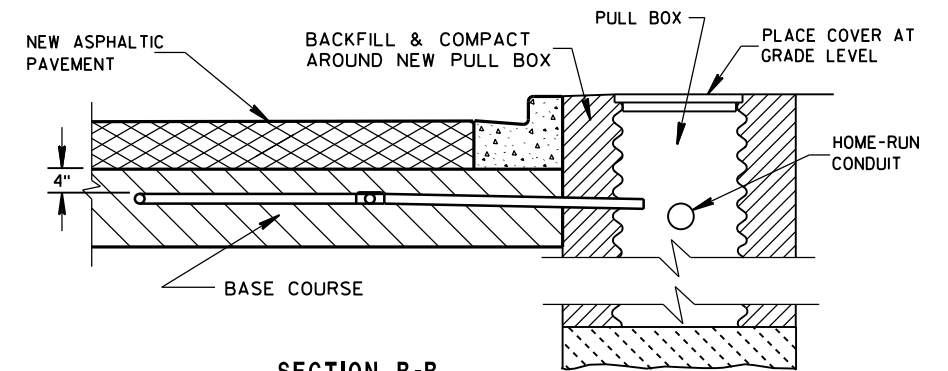
SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

PROTECTION OF THE CONDUIT AND CONDULET SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE ASPHALTIC PAVEMENT IS PLACED.

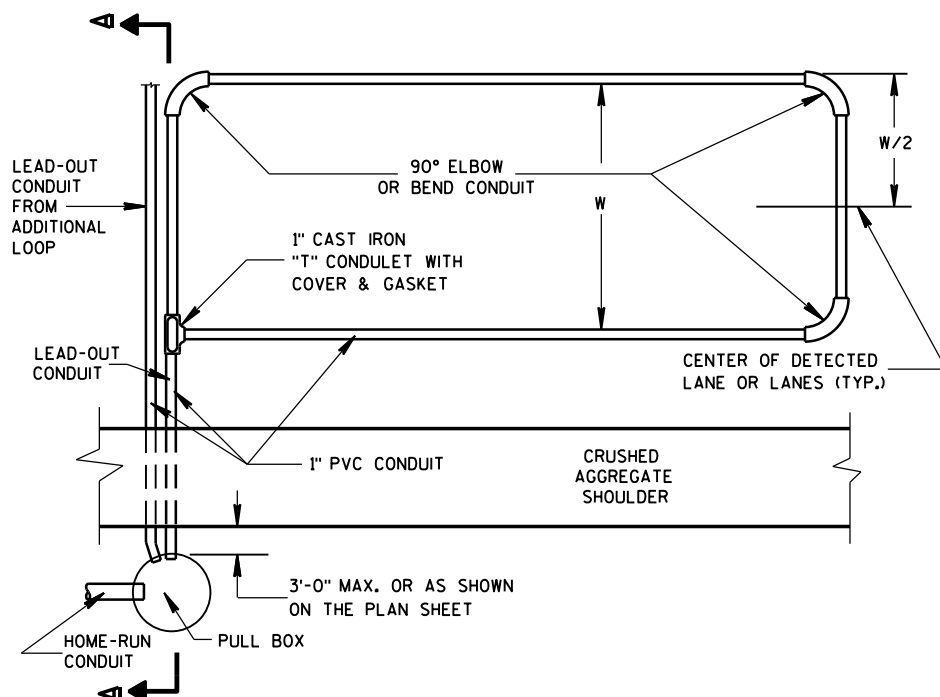
WHEN MULTIPLE LAYERS OF ASPHALTIC PAVEMENT ARE TO BE PLACED, LOOPS MAY BE INSTALLED BY SAWING A TWO INCH WIDE SLOT IN THE FIRST LAYER, DIG OUT THE ASPHALTIC MATERIAL AND BASE COURSE, PLACE THE LOOP, FILL THE SLOT WITH BASE COURSE MATERIAL AND NEW ASPHALTIC MATERIAL AND TAMP THE ASPHALTIC MATERIAL IN PLACE.

SHOULD TRAFFIC BE ALLOWED TO USE THE AREA OF ROADWAY WITH THE NEWLY INSTALLED LOOP BEFORE THE PLACEMENT OF THE NEXT LAYER OF ASPHALTIC PAVEMENT, THE SLOT/PAVEMENT OPENING SHALL BE SEALED WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

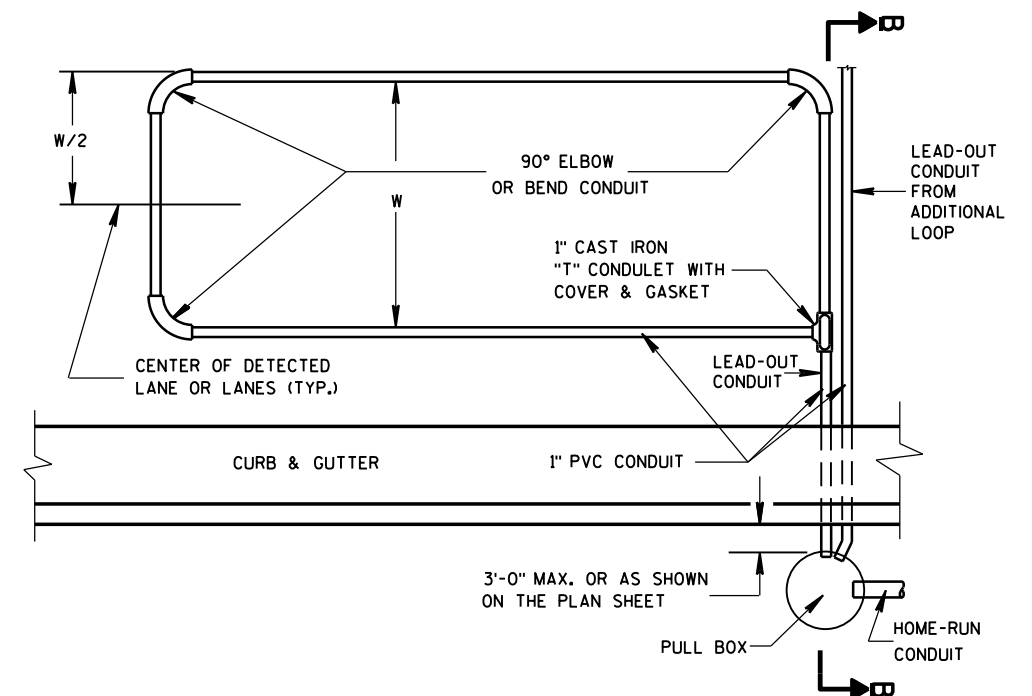


SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR PLACED
IN CRUSHED AGGREGATE BASE
(NEW ASPHALTIC PAVEMENT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

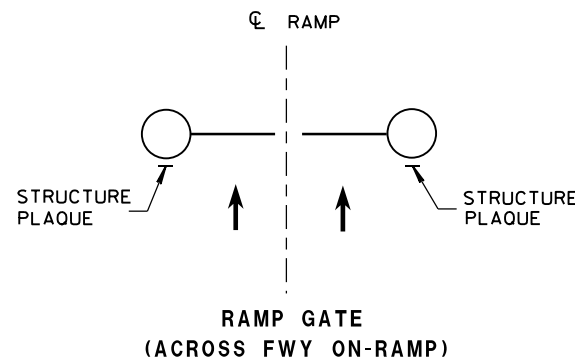
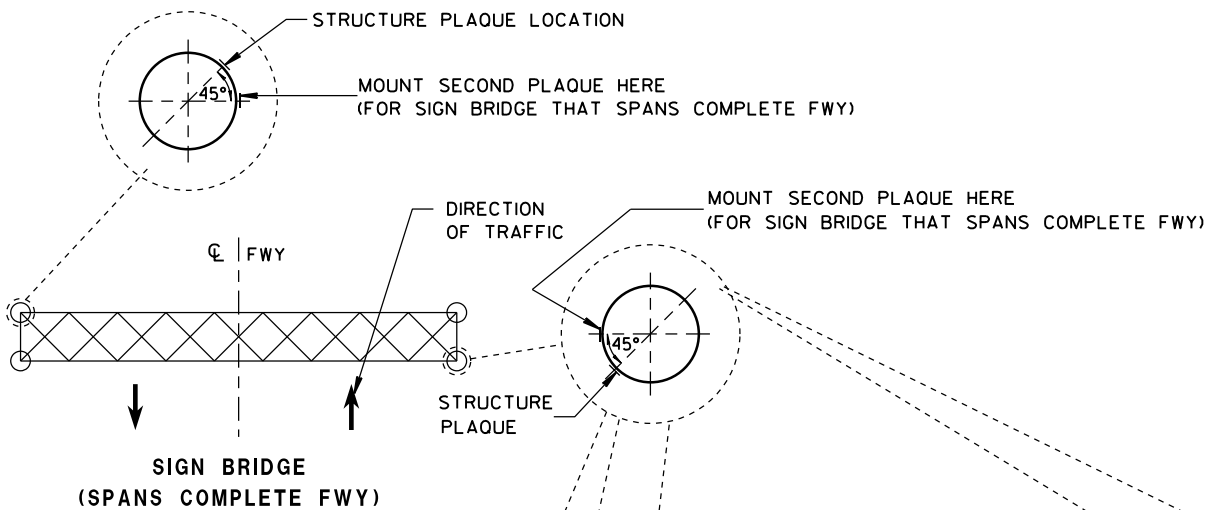
APPROVED
DATE
FHWA

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

96



SDD 12a4 Structure Identification Plaques, Ramp Gates, Sign Bridges, Overhead Sign Supports and Traffic Signals



GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS;
FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

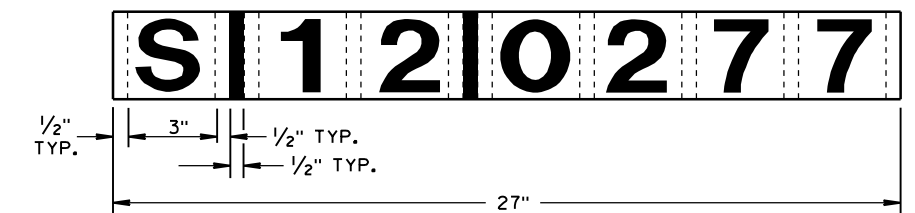
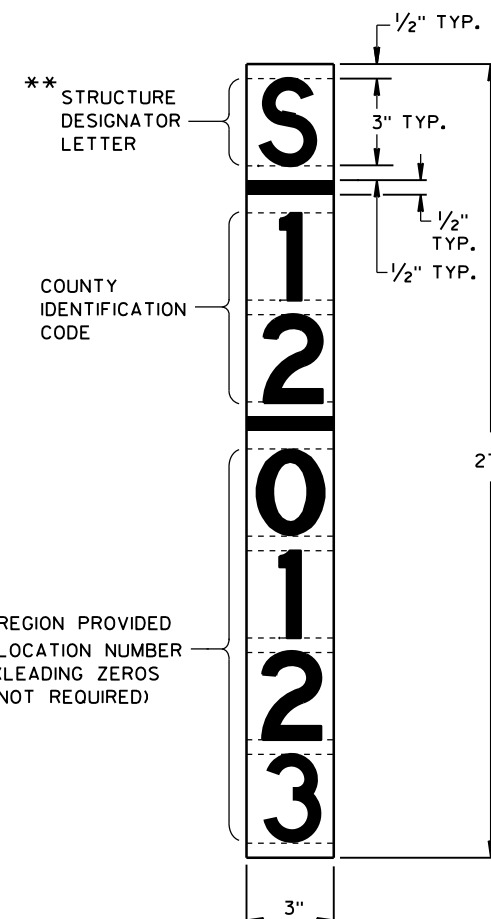
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

* WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 12/4/2012 DATE	/S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN 97
FHWA	



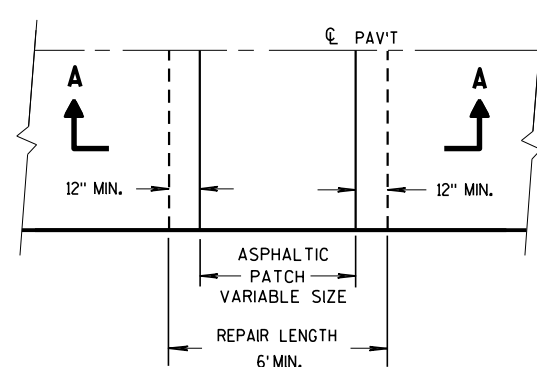
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

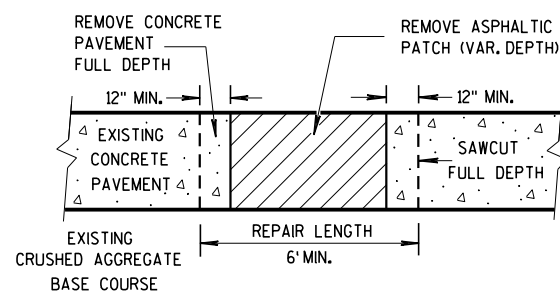
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

① DOWEL BARS MIGHT NOT EXIST.

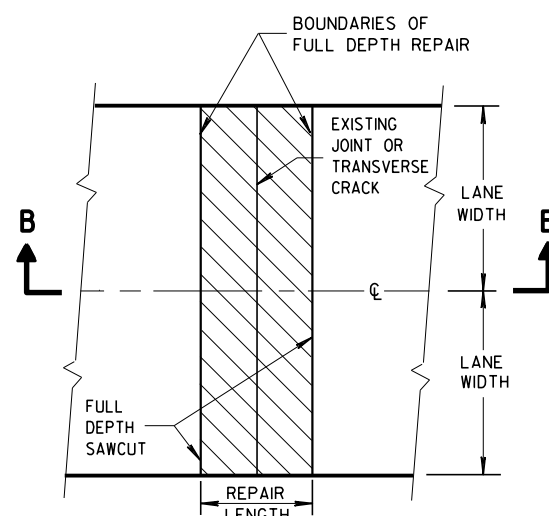


PLAN VIEW

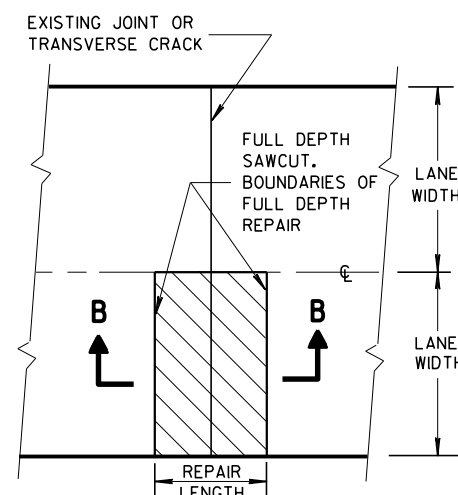


SECTION A-A

HMA PATCH REMOVAL

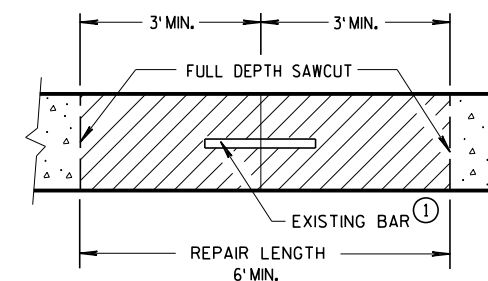


PLAN VIEW
(DOUBLE LANE REPAIR)

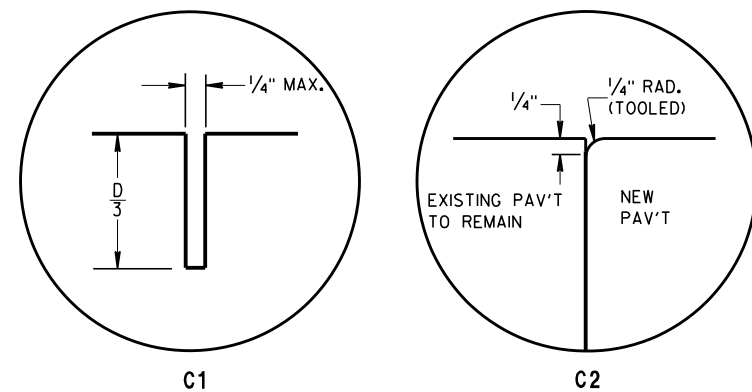


PLAN VIEW
(SINGLE LANE REPAIR)

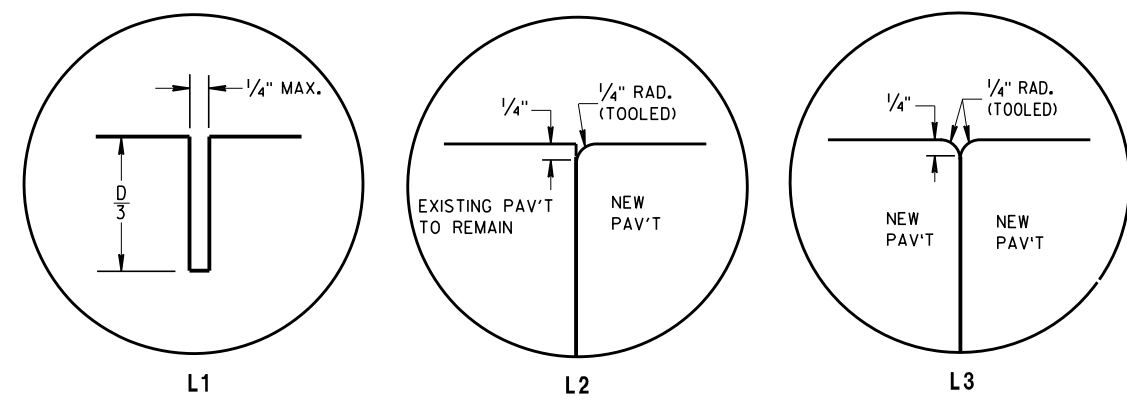
FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION B-B
CONCRETE REMOVAL



TRANSVERSE JOINTS

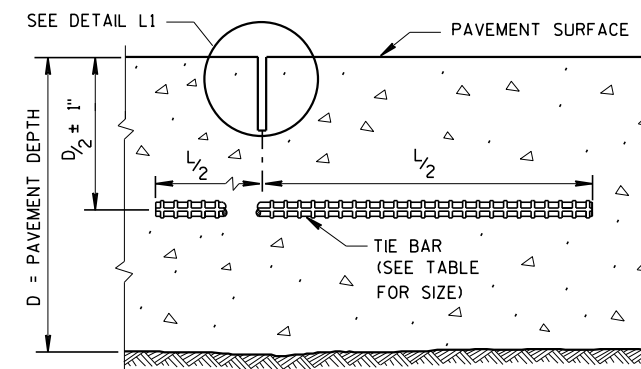


LONGITUDINAL JOINTS

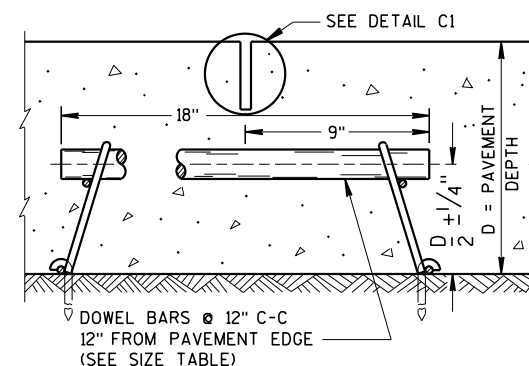
TIE BAR TABLE			
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



SECTION C-C
SAWED LONGITUDINAL JOINT



SECTION F-F
CONTRACTION JOINT

GENERAL NOTES

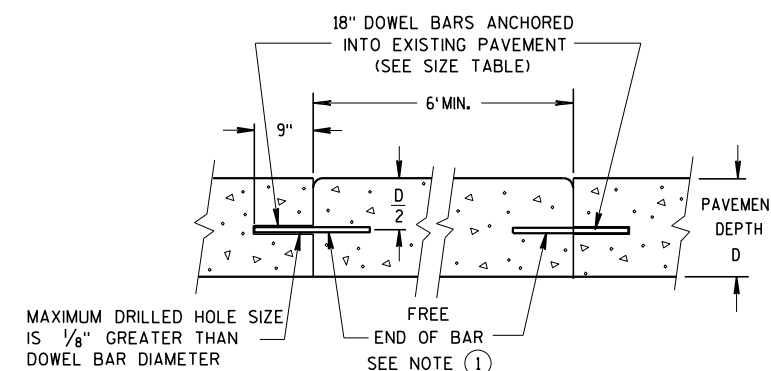
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

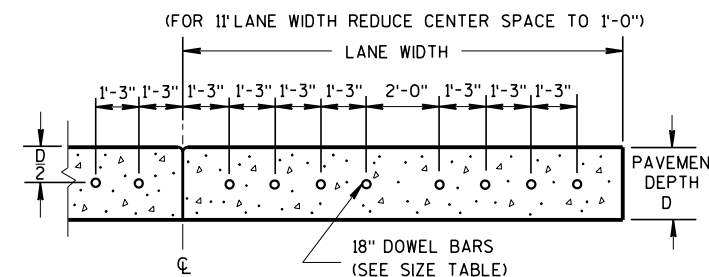
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- 1 APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D-D



SECTION E-E
DRILLED DOWEL BAR CONSTRUCTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	NONE	12'
7", 7 1/2"	1"	1"	14'
8", 8 1/2"	1 1/4"	1 1/4"	15'
9", 9 1/2"	1 1/4"	1 1/4"	15'
10" & ABOVE	1 1/2"	1 1/4"	15'

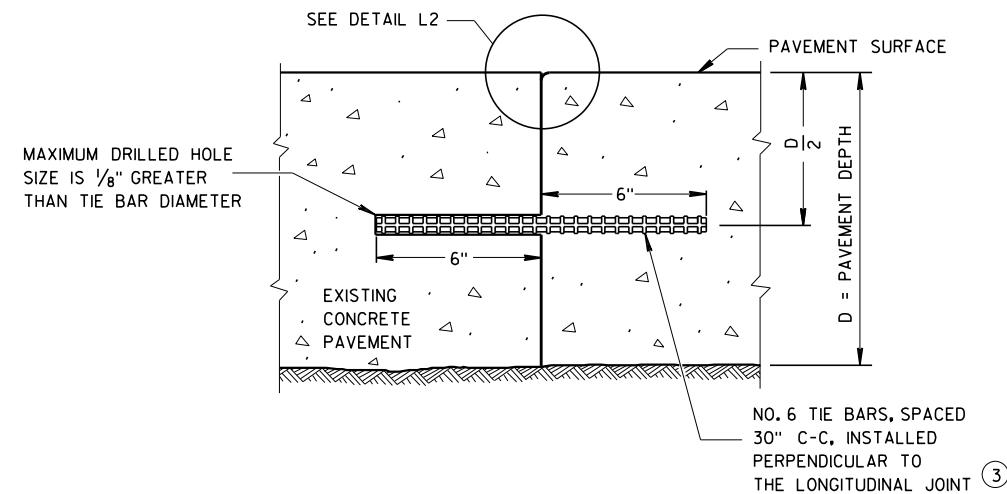
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

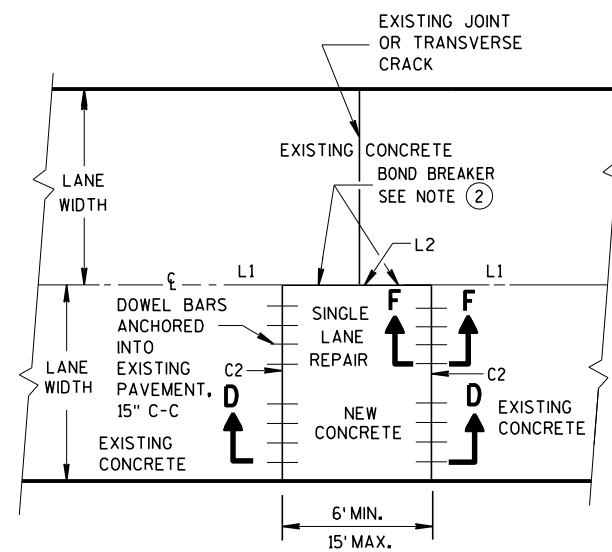


GENERAL NOTES

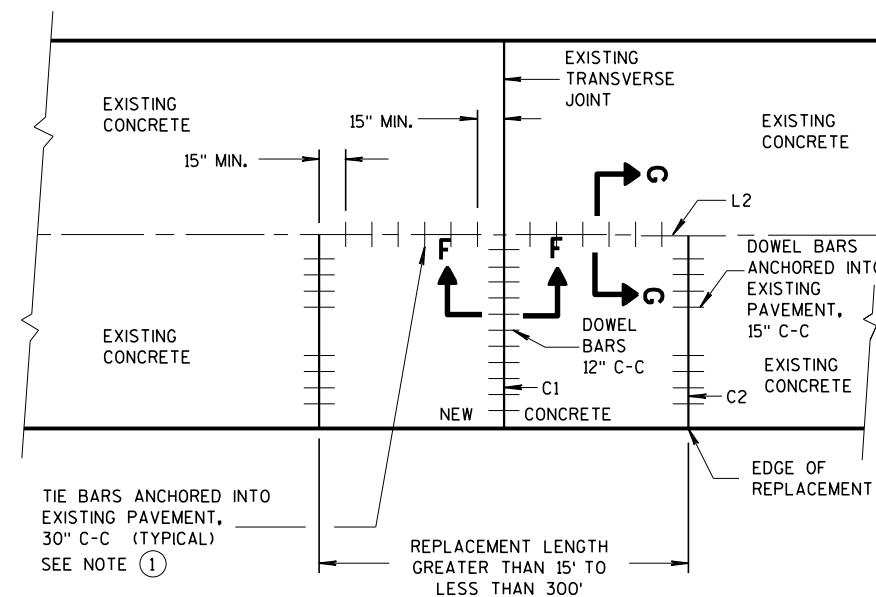
- WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.
- ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



SECTION G-G
TIE BARS ANCHORED
INTO EXISTING PAVEMENT



PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPAIR



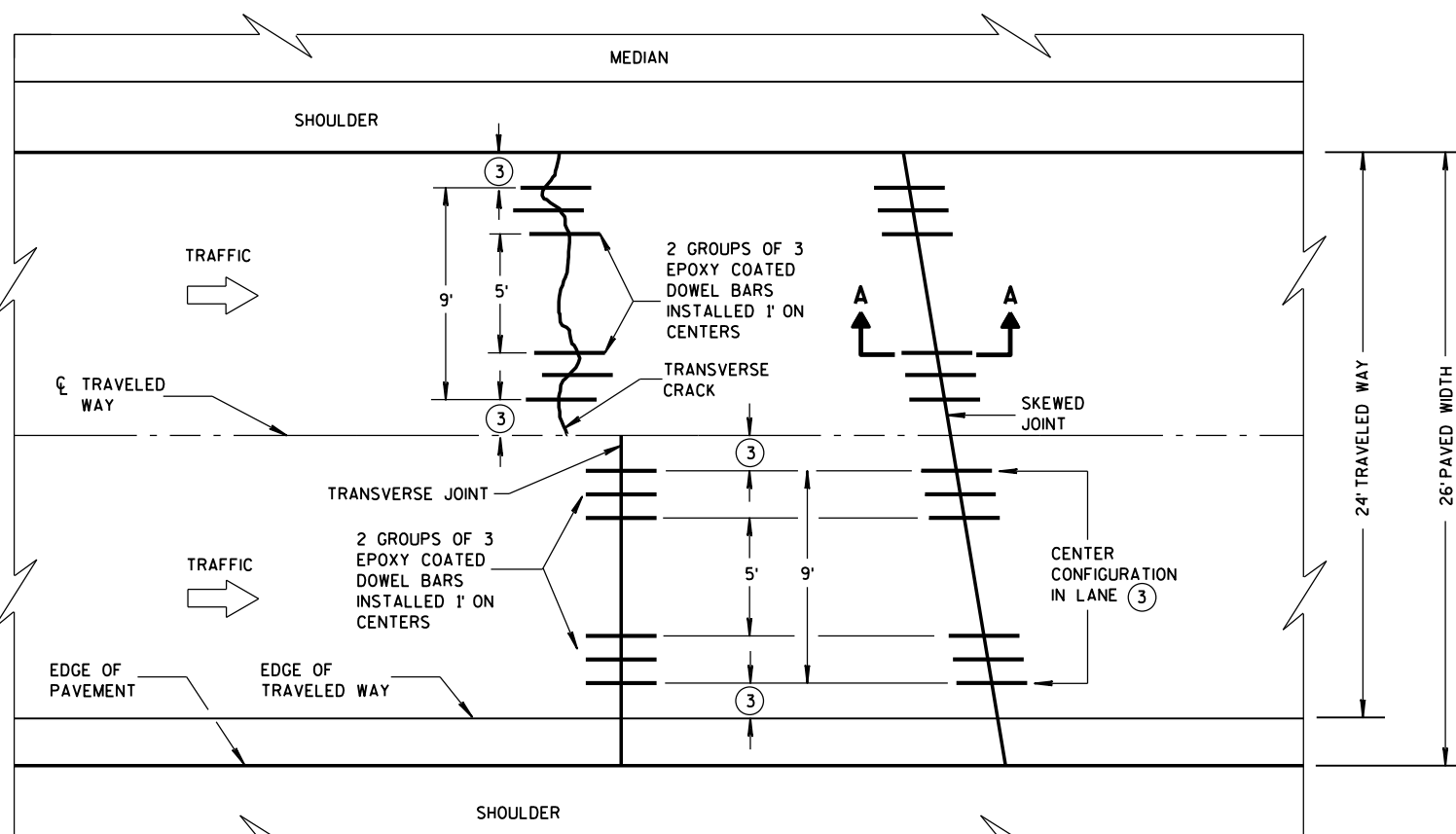
PLAN VIEW
SINGLE LANE
CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

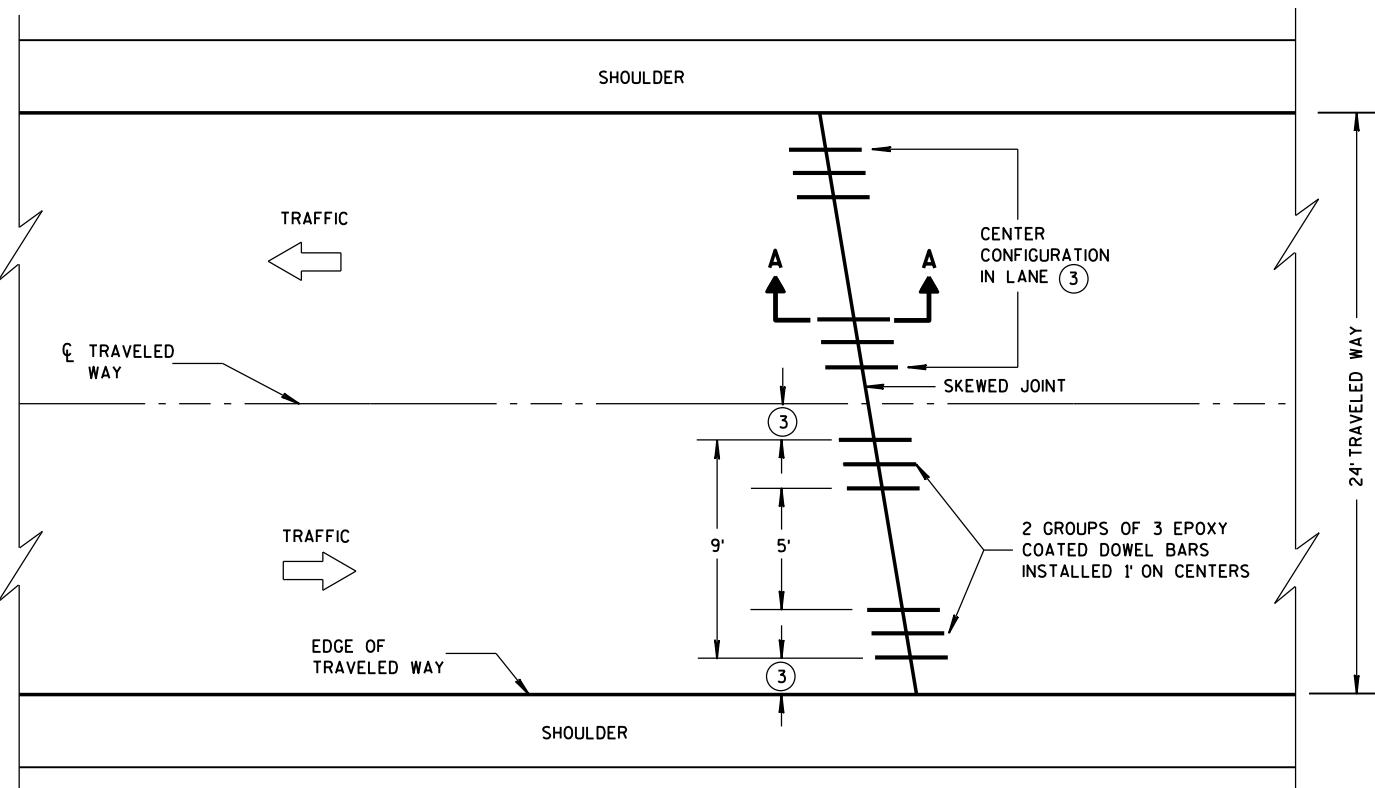
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA

100



RETROFIT DOWEL BAR SPACING
DIVIDED HIGHWAY



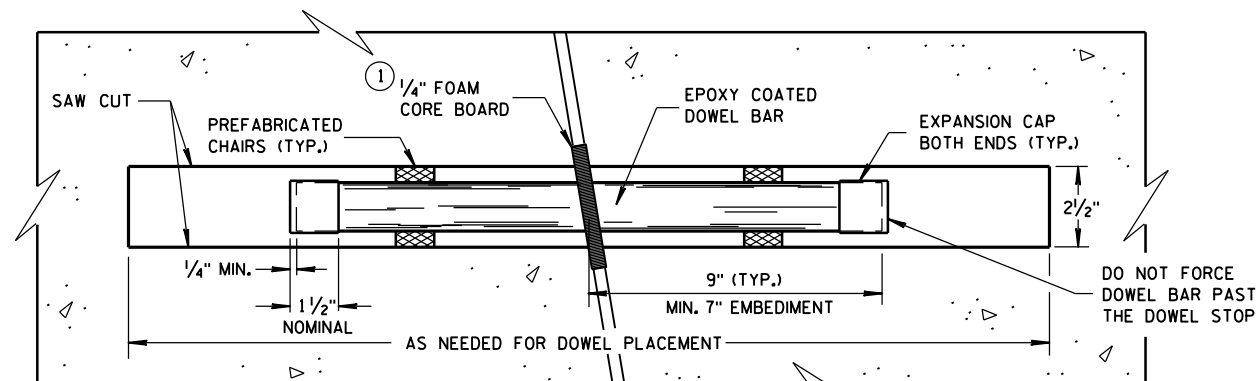
RETROFIT DOWEL BAR SPACING
TWO-LANE TWO-WAY HIGHWAY

RETROFIT DOWEL BAR INSTALLATION

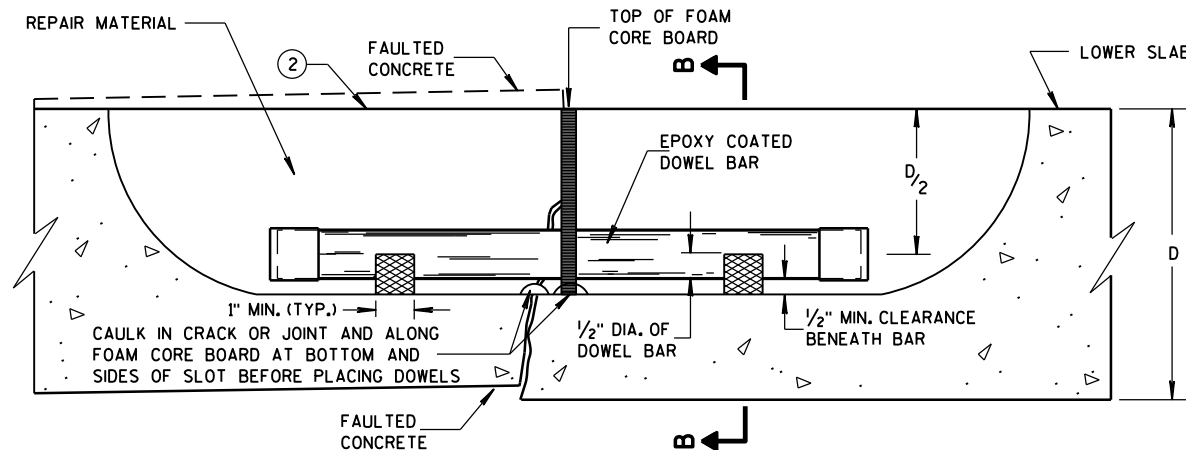
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIAL AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISION.

- 1 FOAM CORE BOARD IS TO BE SIZED AND SHAPED TO FIT INTO THE JOINT OR CRACK, EXTEND TO OR BEYOND THE TOP SURFACE OF THE LOWER SLAB, AND FIT TIGHTLY AROUND THE DOWEL.
- 2 FINISHED ELEVATION AFTER CONTINUOUS DIAMOND GRINDING, WHEN REQUIRED.
- 3 SAW THE SLOTS SO THAT THE OUTERMOST AND INNERMOST SLOTS ARE EQUALLY SPACED FROM THE EDGE OF PAVEMENT AND THE LONGITUDINAL JOINT, RESPECTIVELY.

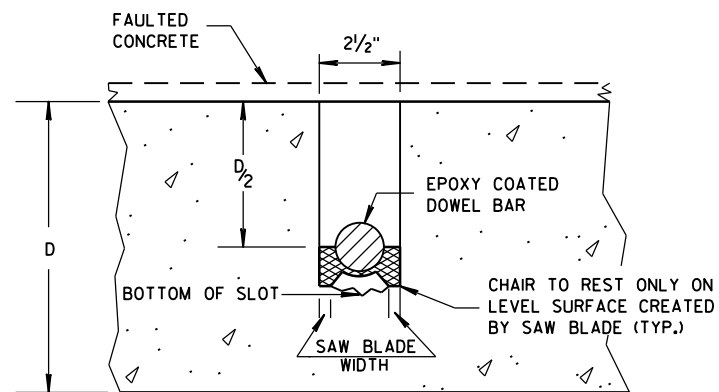


PLAN VIEW



SIDE VIEW
SECTION A-A

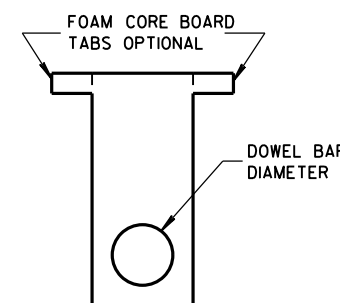
DOWEL BAR INSTALLATION DETAIL



SECTION B-B

PAVEMENT DEPTH	DOWEL BAR SIZE
9" OR LESS	1 1/4" X 18"
MORE THAN 9"	1 1/2" X 18"

DOWEL BAR SIZE TABLE



1/4" FOAM CORE BOARD

RETROFIT DOWEL BARS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2014 /S/ Laura Fenley 101
DATE PAVEMENT POLICY & DESIGN ENGINEER
FHWA



GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

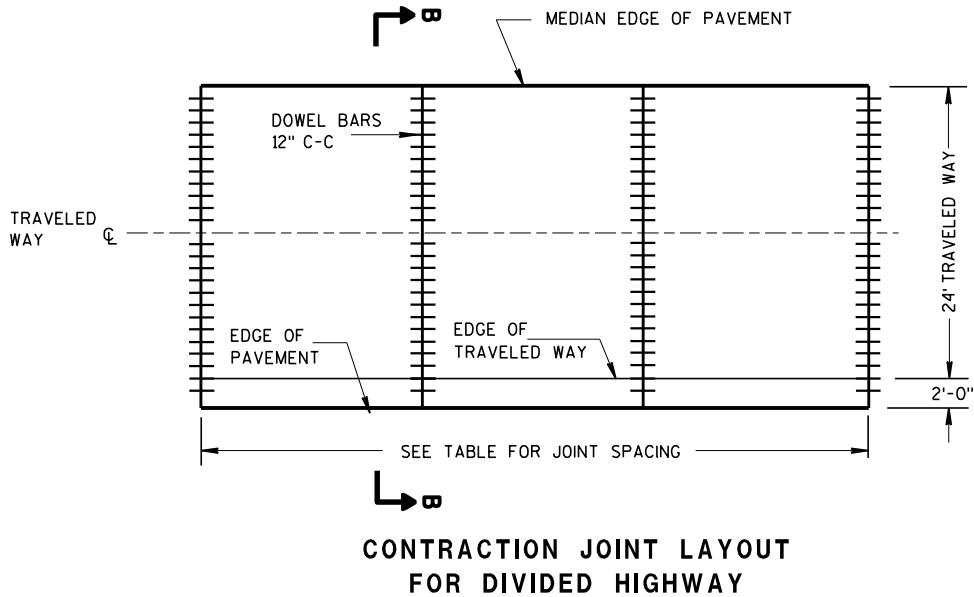
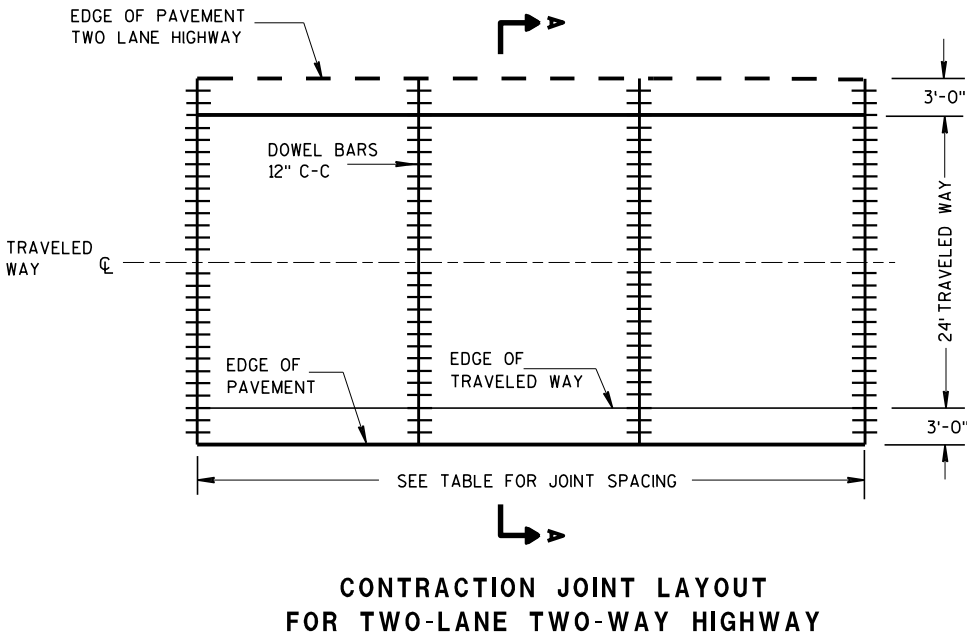
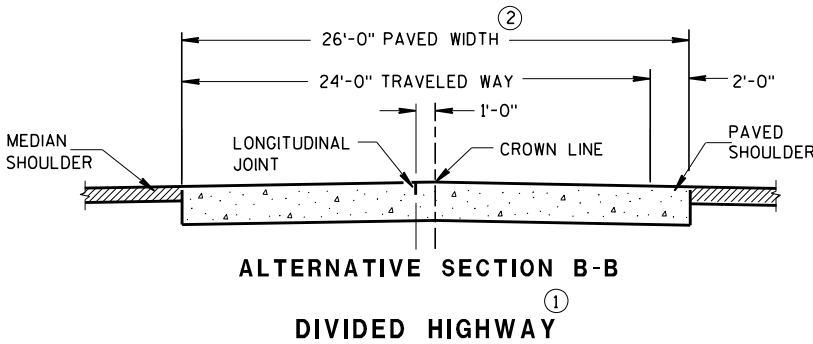
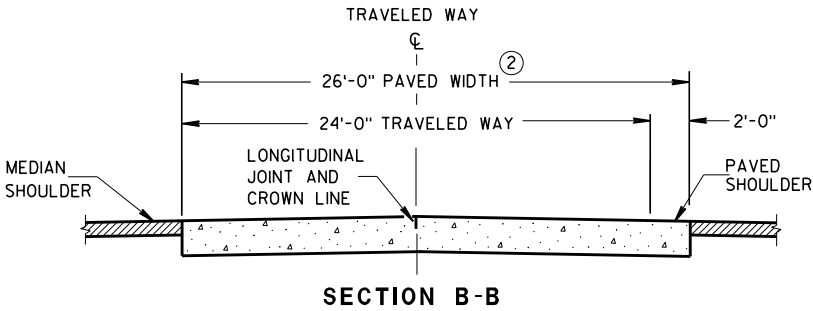
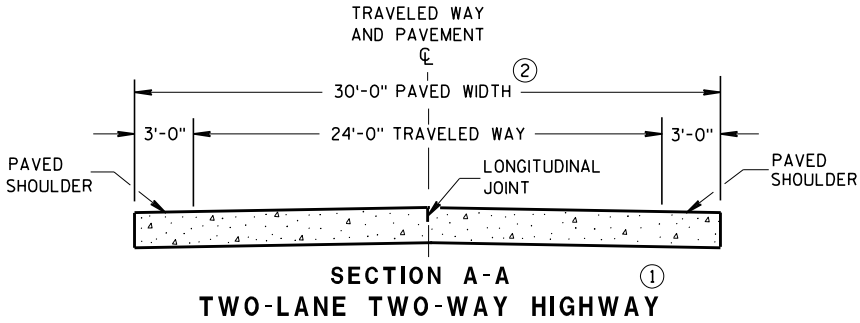
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

- ① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.
- ② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

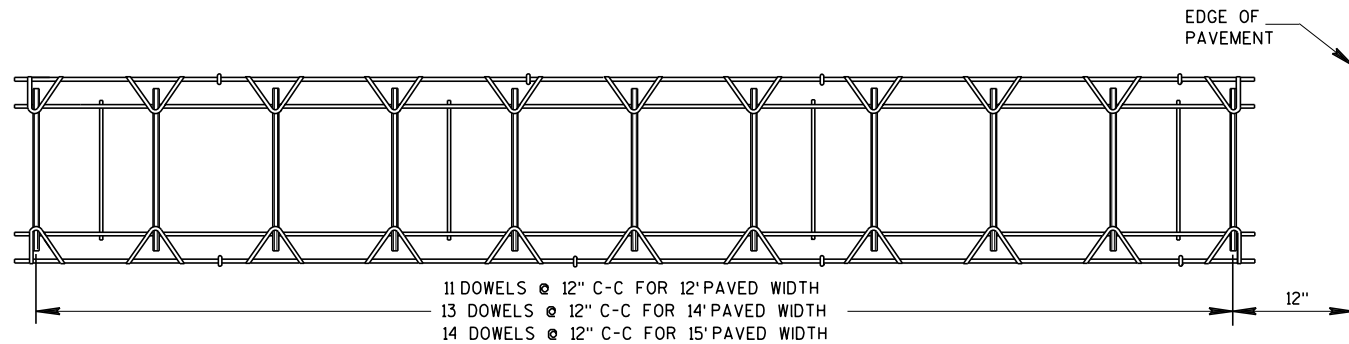
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

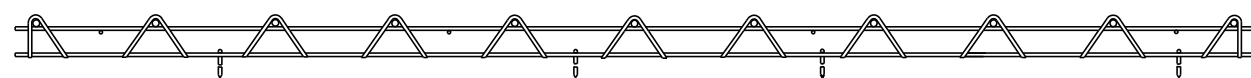


RURAL DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



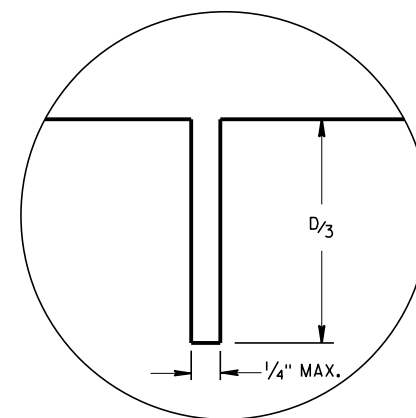
PLAN VIEW



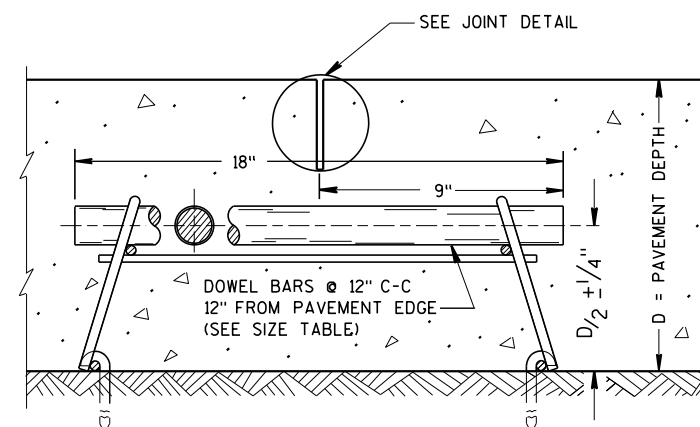
SIDE VIEW

(NORMAL TO CENTERLINE)

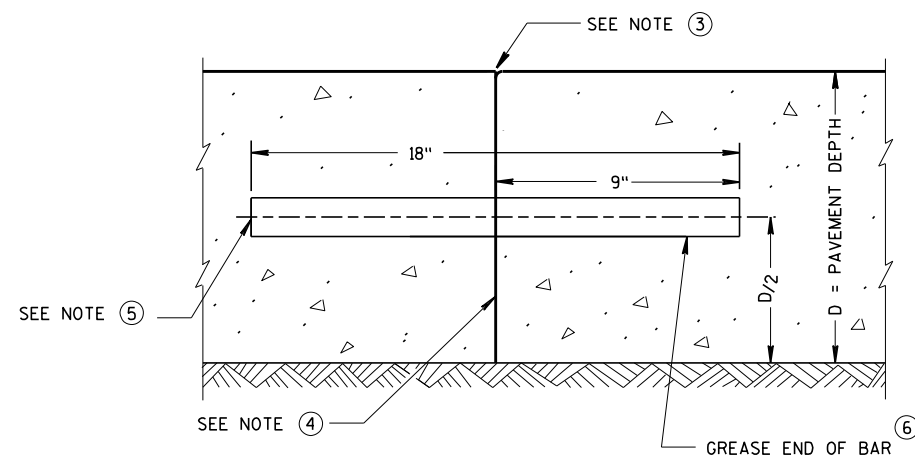
CONTRACTION JOINT DOWEL ASSEMBLY ①



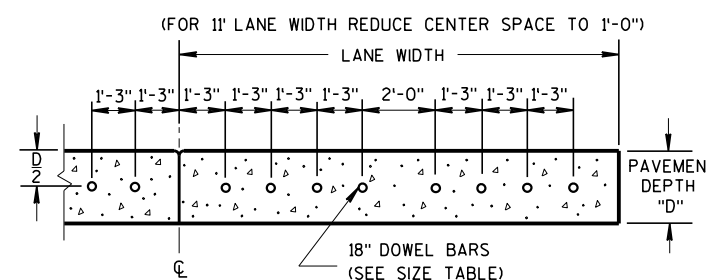
JOINT DETAIL



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

GENERAL NOTES

- ① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- ② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- ③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.
- ④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- ⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.
- ⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

March 2018

DATE

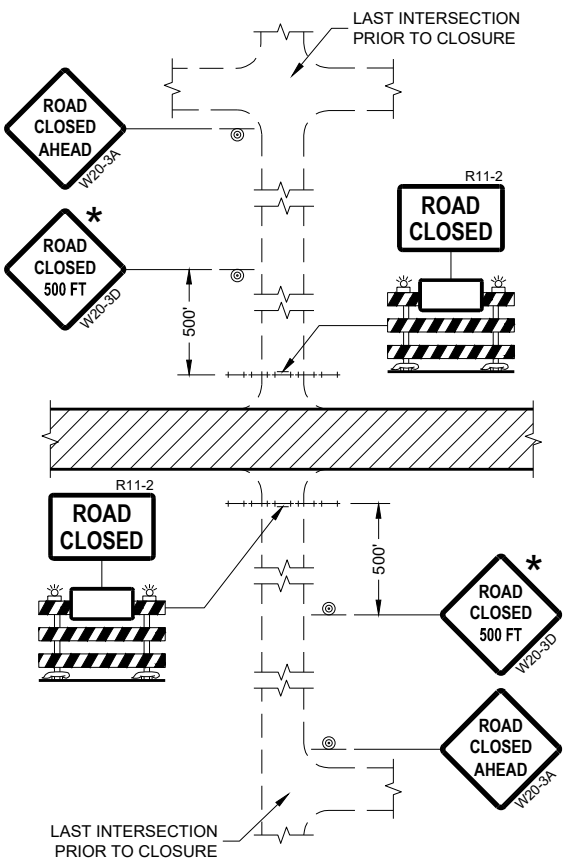
FHWA

/S/ Peter Kemp, P.E.

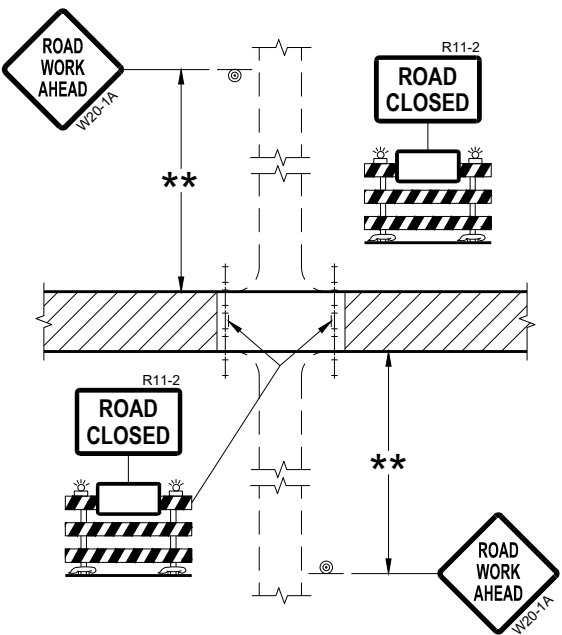
PAVEMENT SUPERVISOR

103

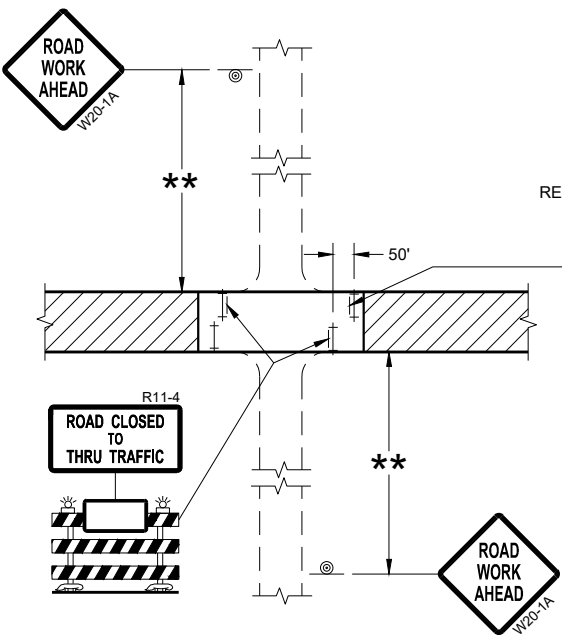
SDD 15C03 Barricades and Signs for Sideroad Closures



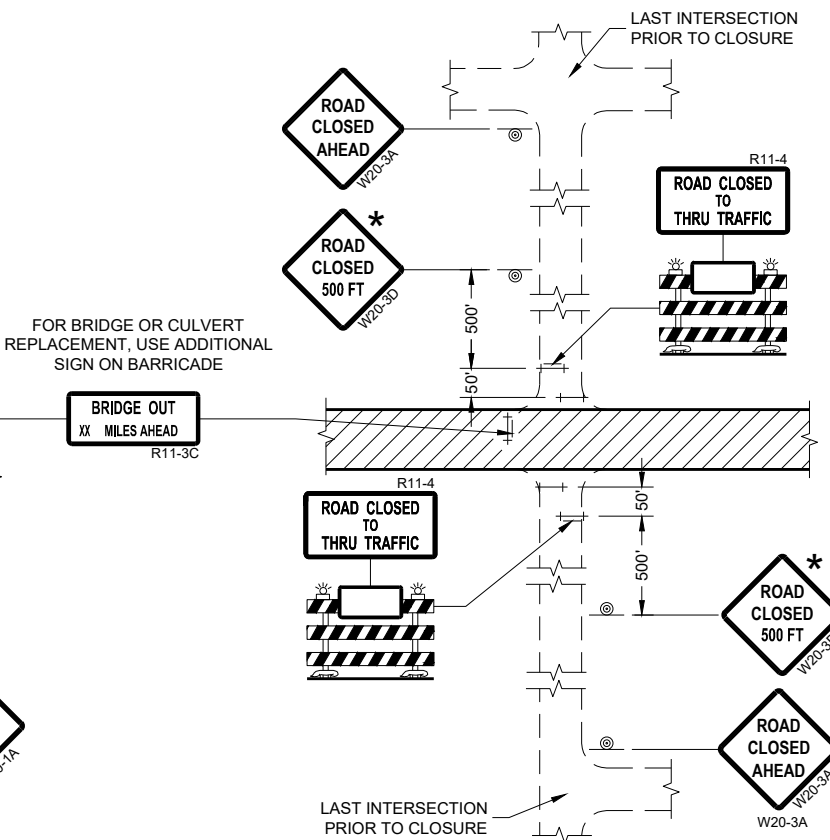
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

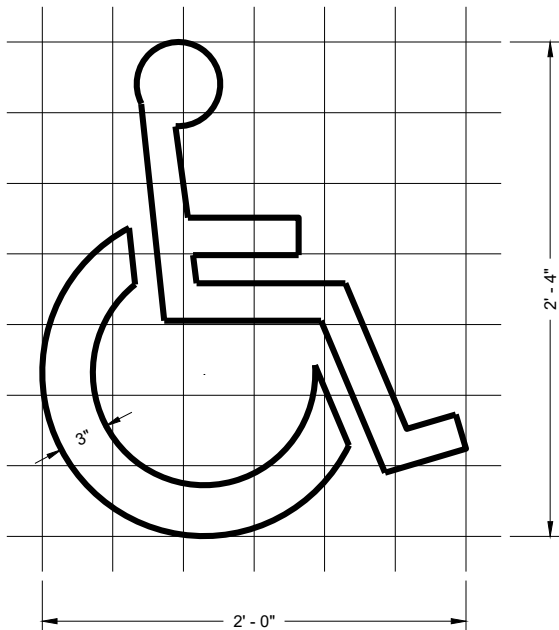
APPROVED
July 2018 /S/ Andrew Heidtke 104
DATE WORK ZONE ENGINEER
FHWA



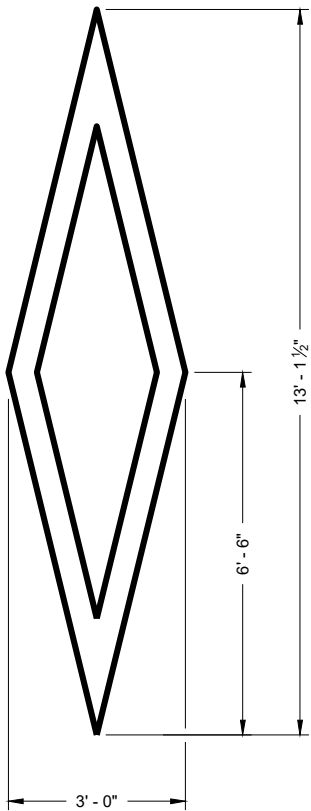
SDD 15C07-a Pavement Marking Symbols

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



HANDICAP SYMBOL



PREFERENTIAL
LANE SYMBOL

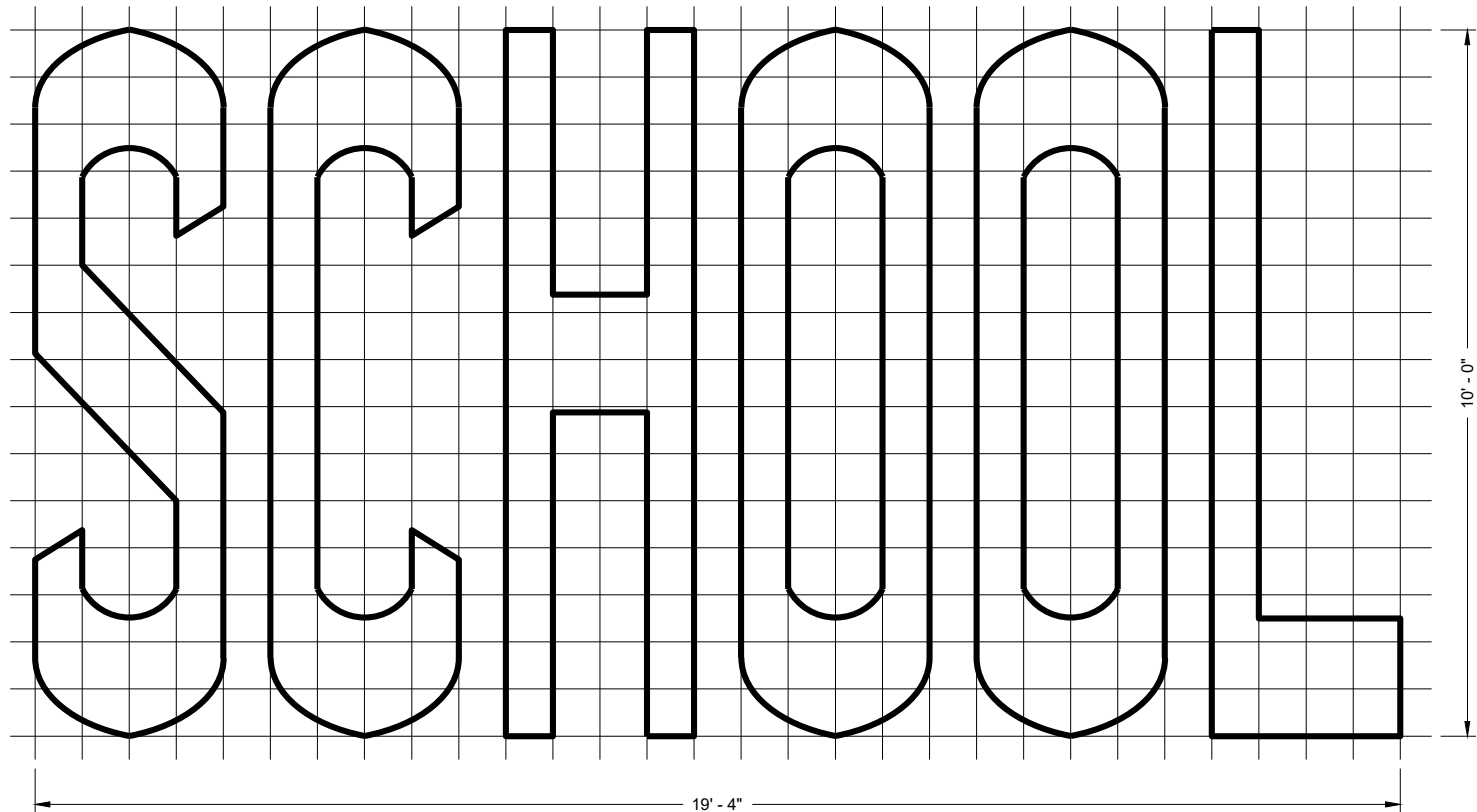
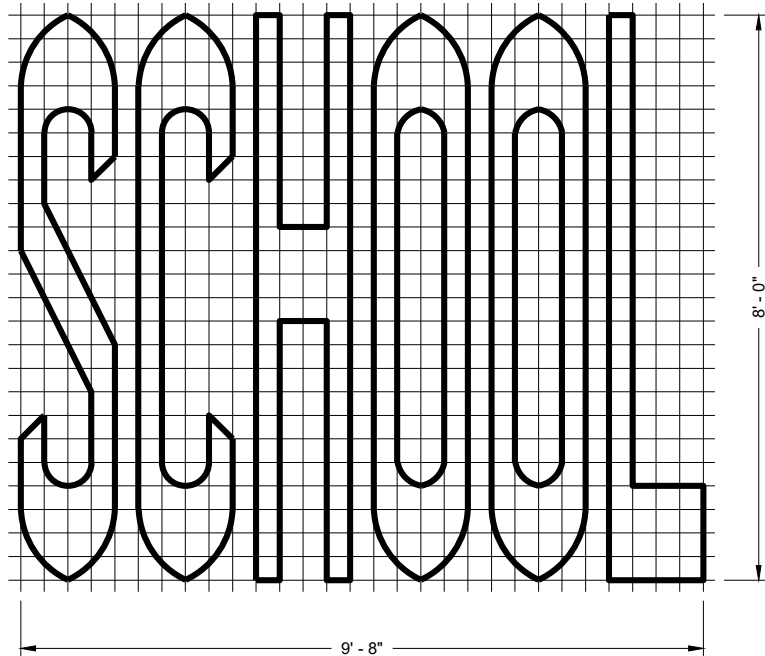
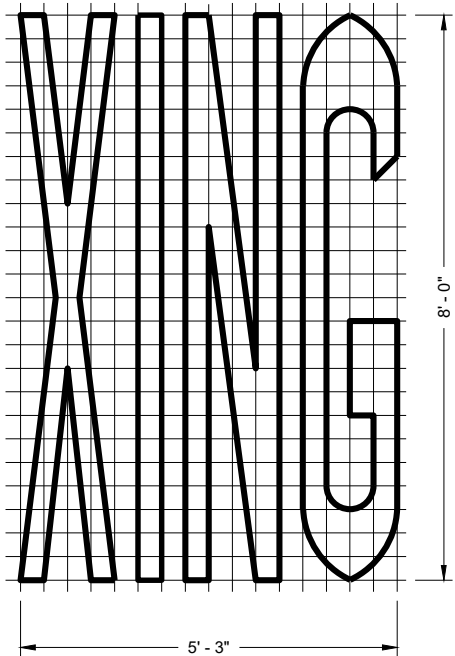
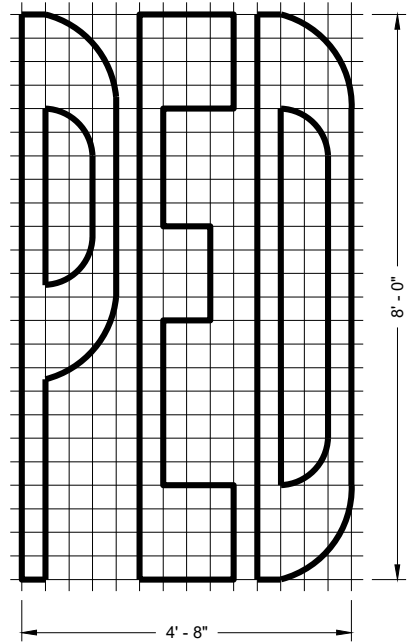
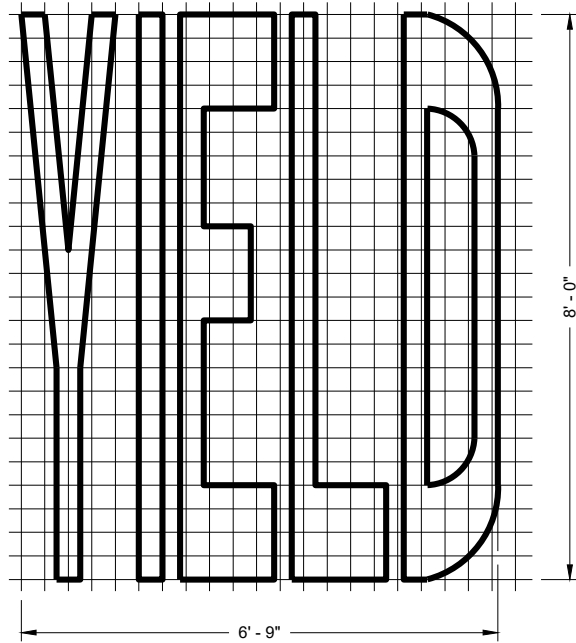
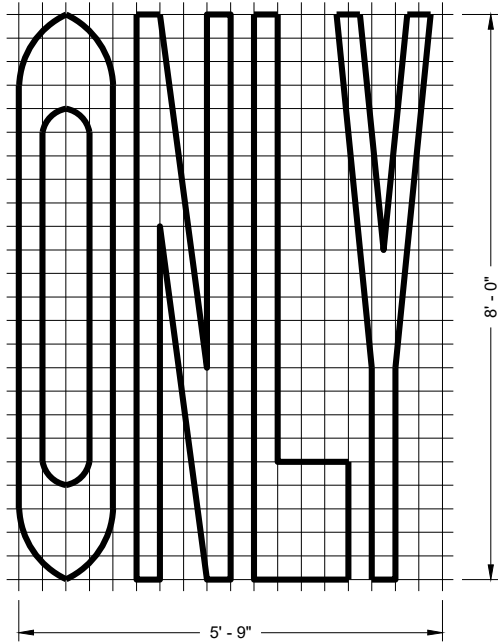
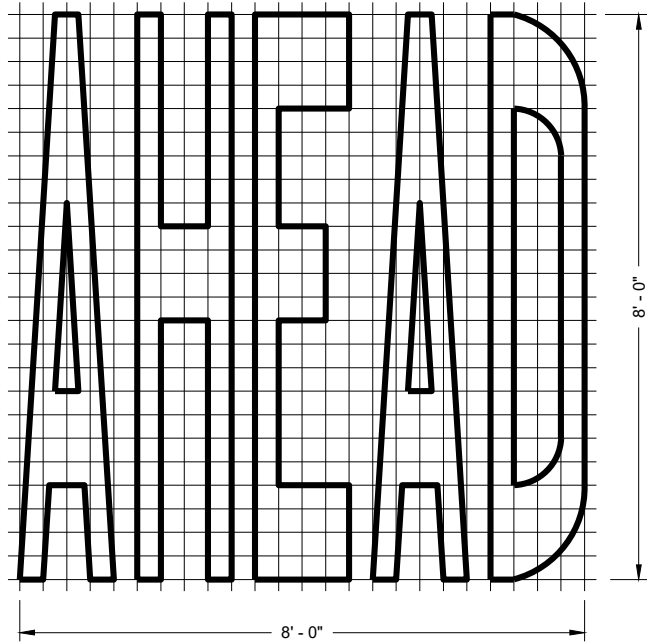
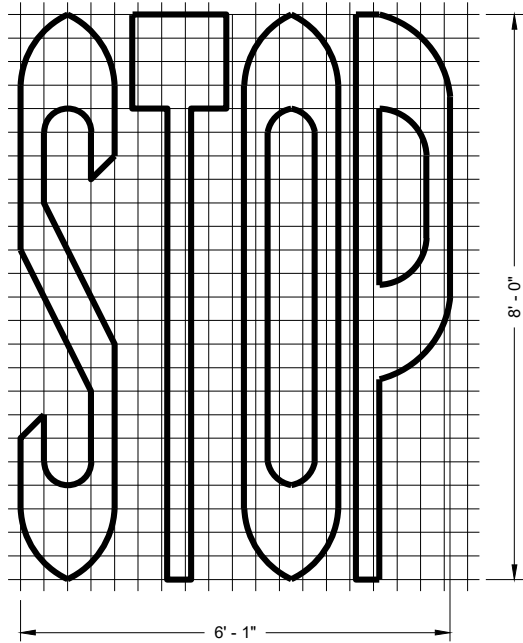
PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch 105
DATE STATE SIGNING AND MARKING
ENGINEER
FHWA



SDD 15C07-b Pavement Marking Words



SINGLE LANE

TWO - LANE

GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
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ENGINEER

106

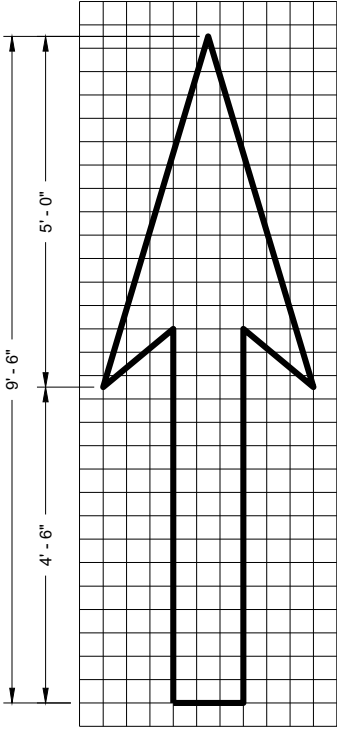
FHWA

6

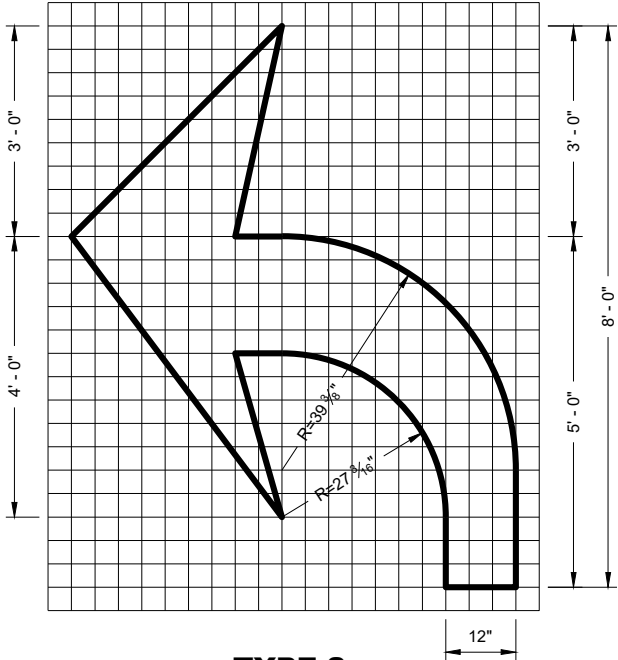
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SDD 15C07 - 15b

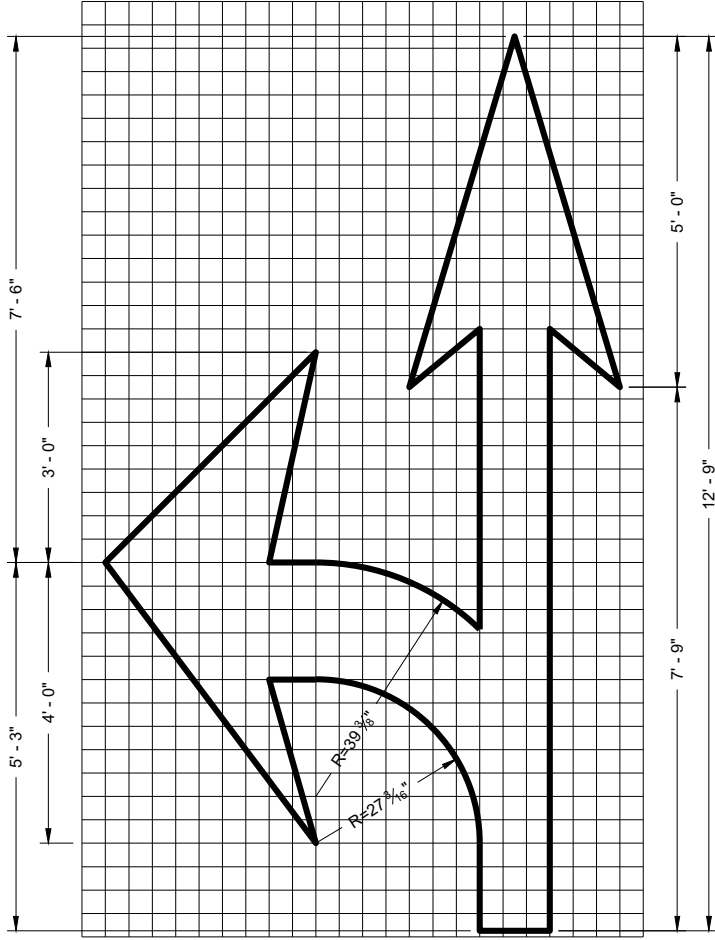
SDD 15C07 - 15b



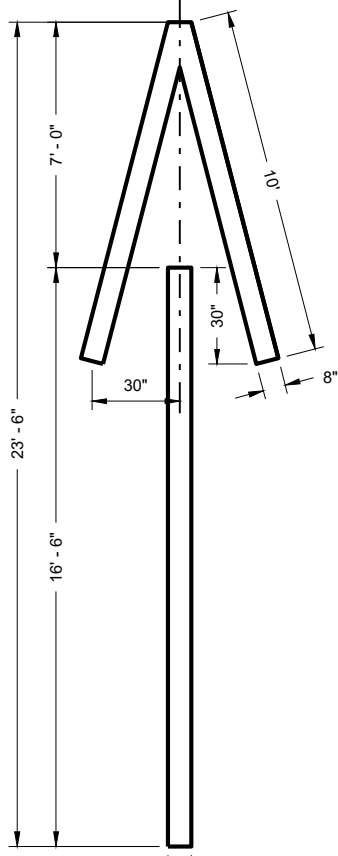
TYPE 1



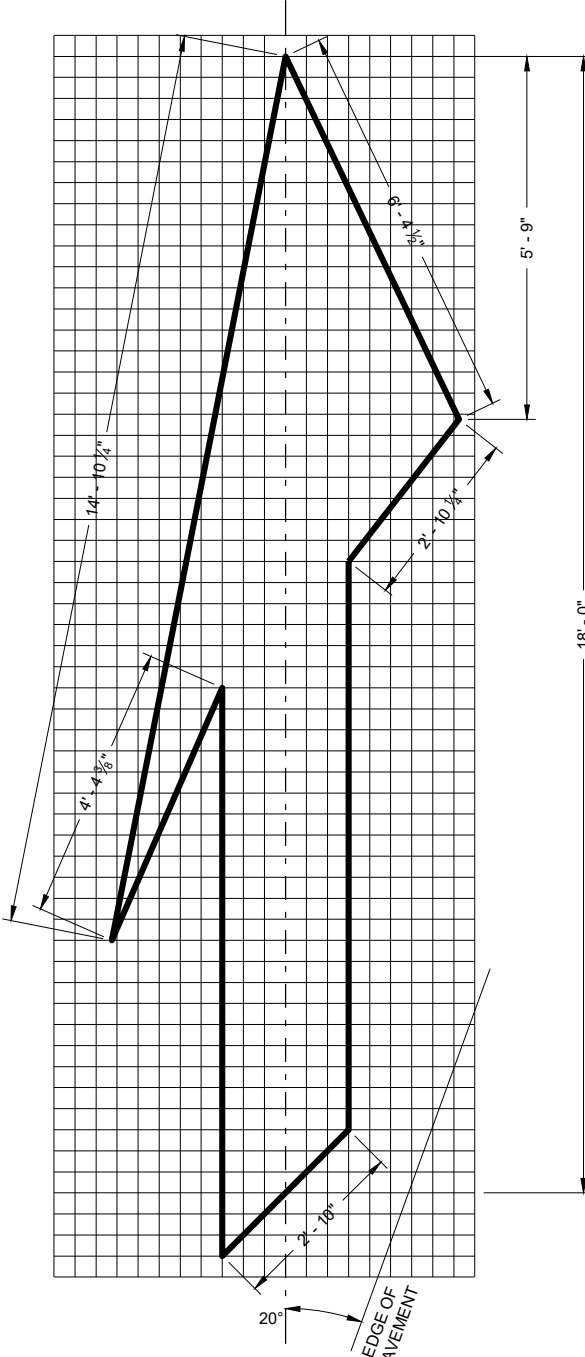
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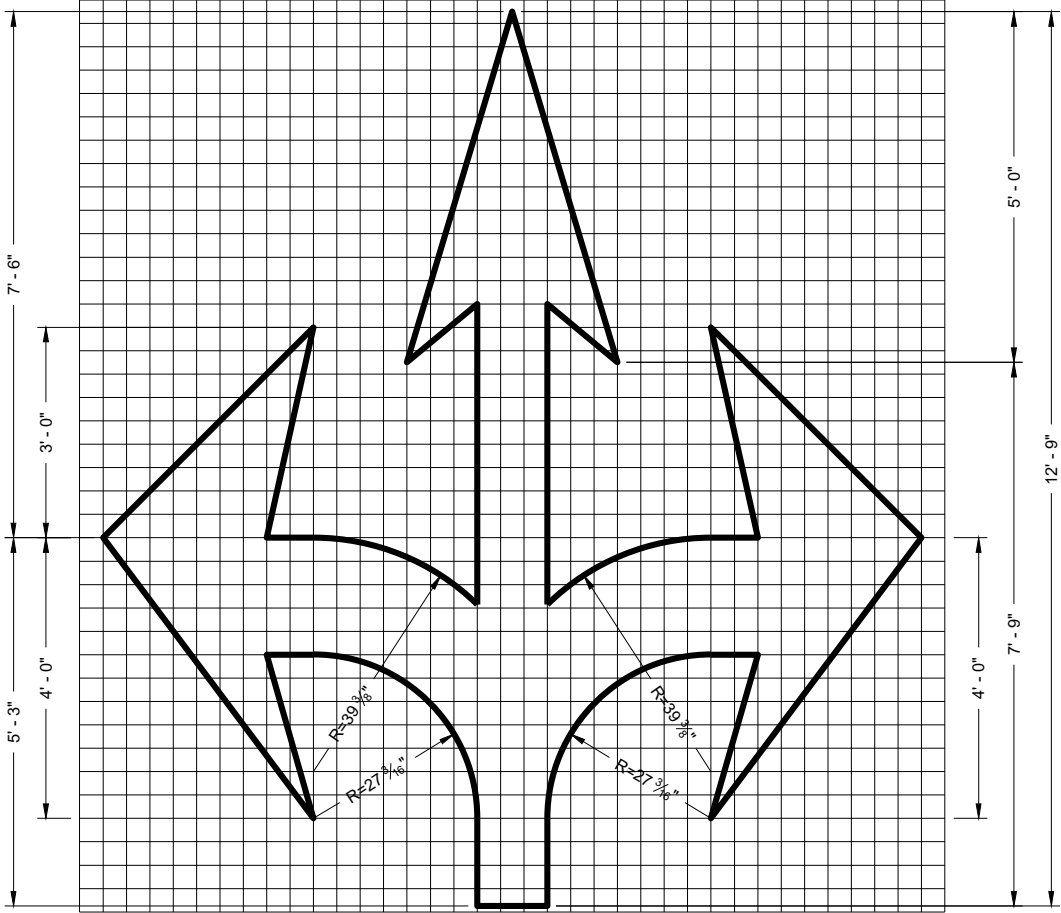
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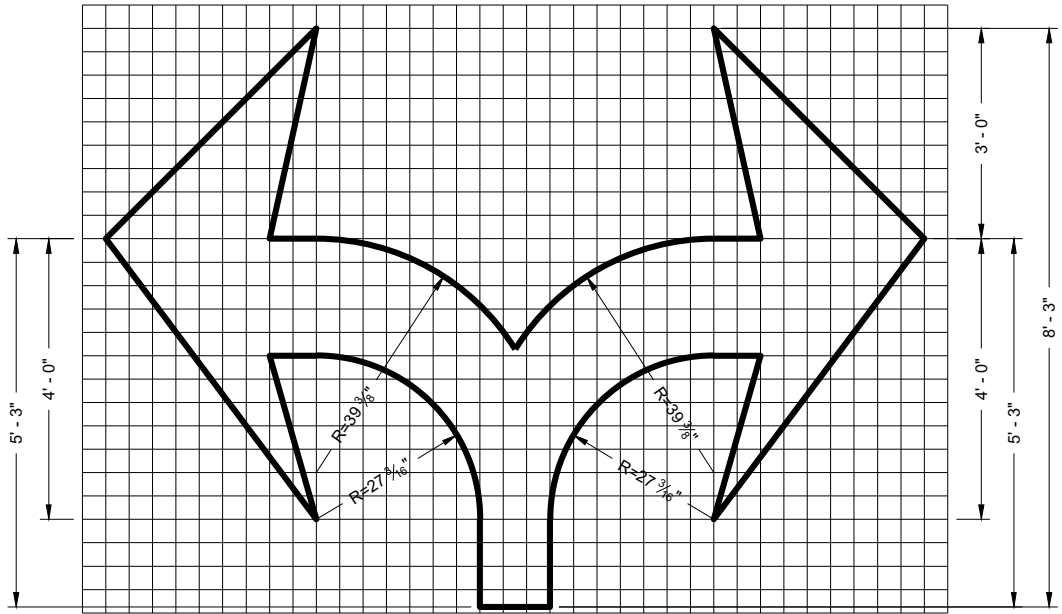
TYPE 4



TYPE 5 LANE DROP ARROW



TYPE 6



TYPE 7

GENERAL NOTES

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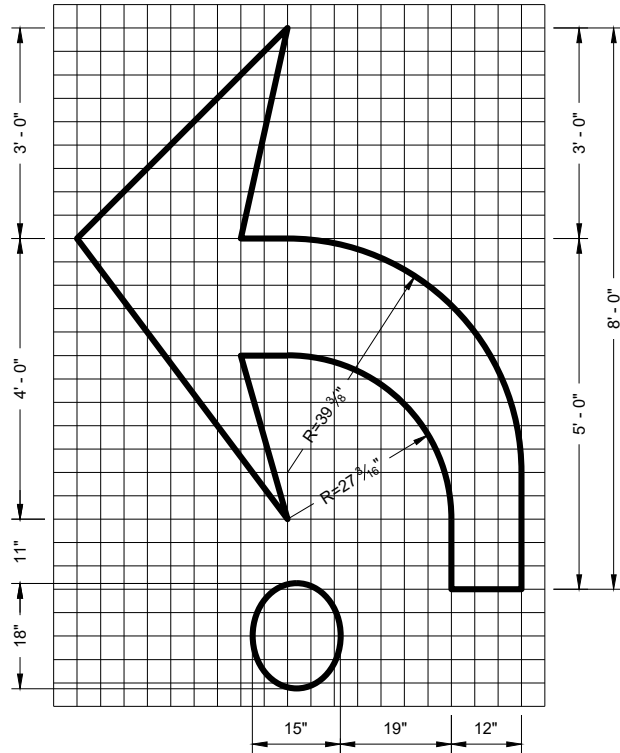
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

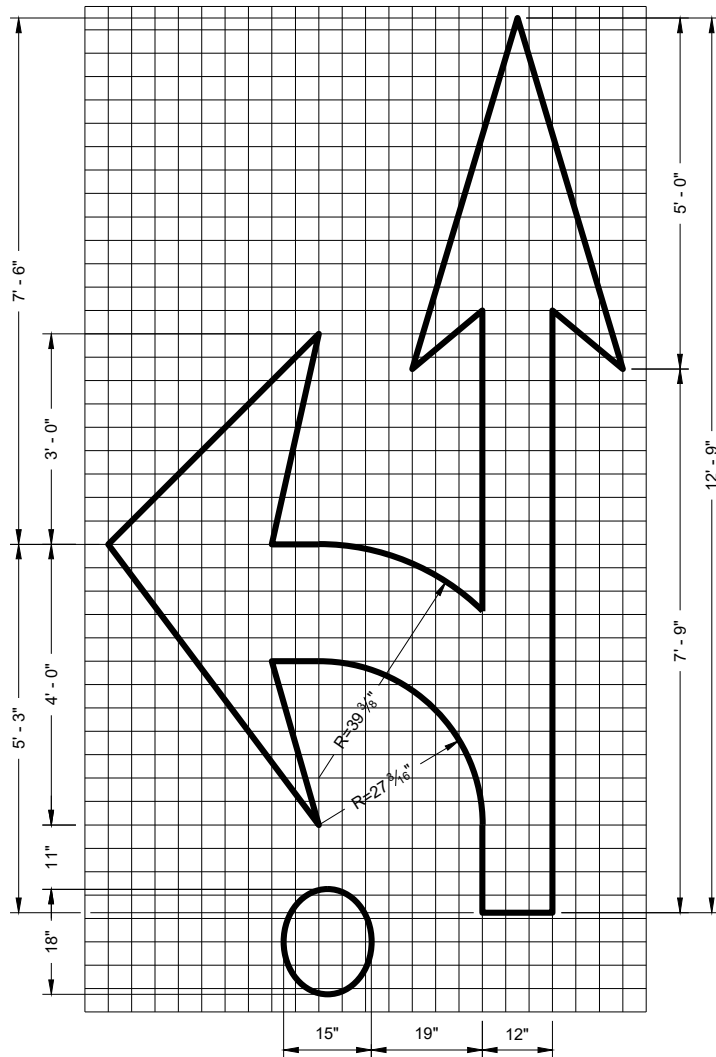
APPROVED
November 2019
DATE
/S/ Matthew Rauch
STATE SIGNING AND MARKING
ENGINEER

GENERAL NOTES

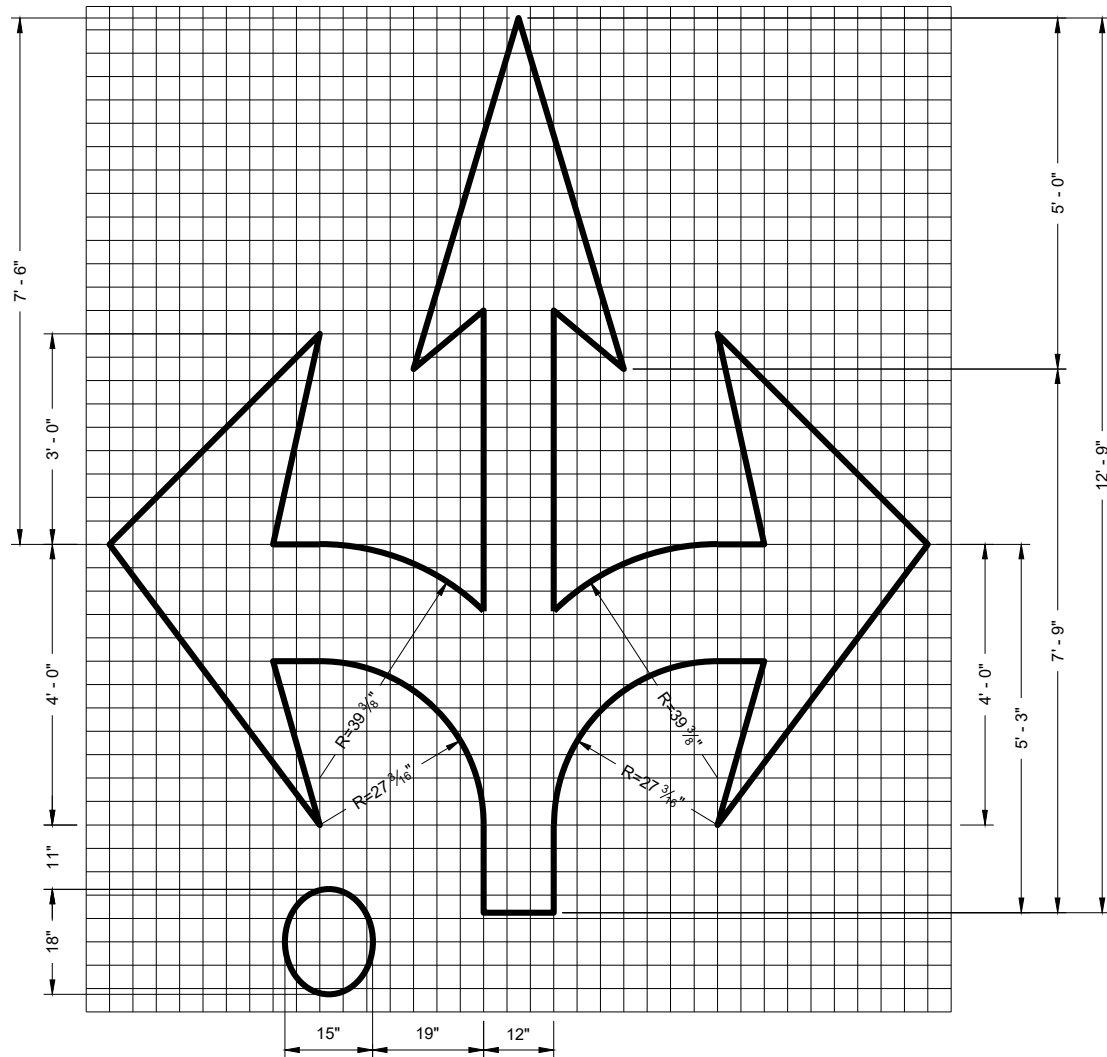
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



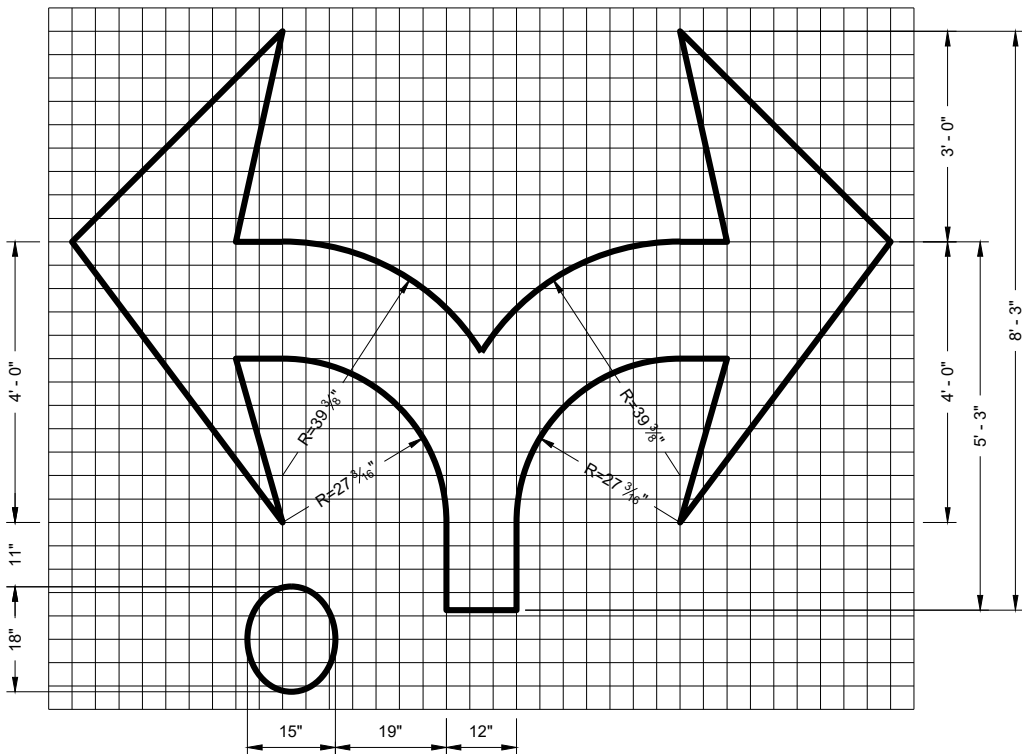
TYPE 2R



TYPE 3R



TYPE 6R

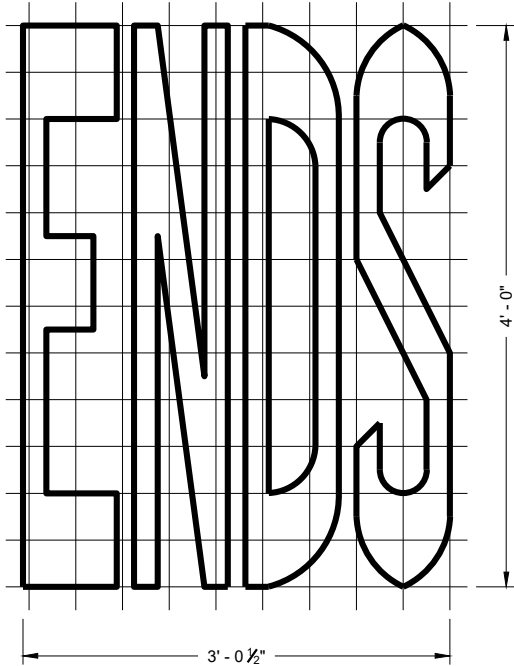
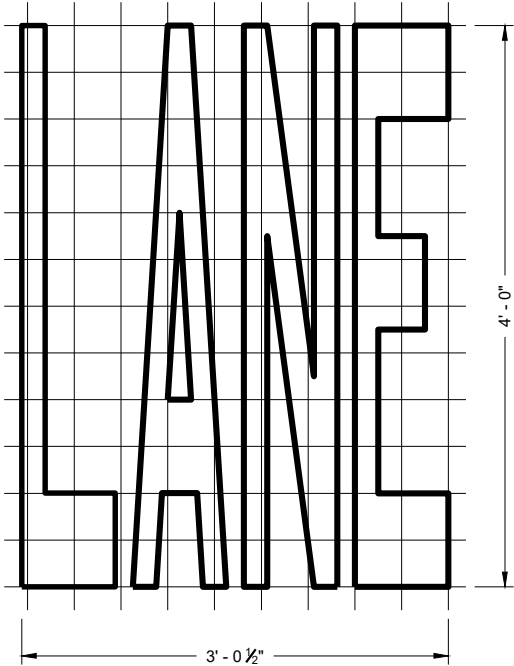
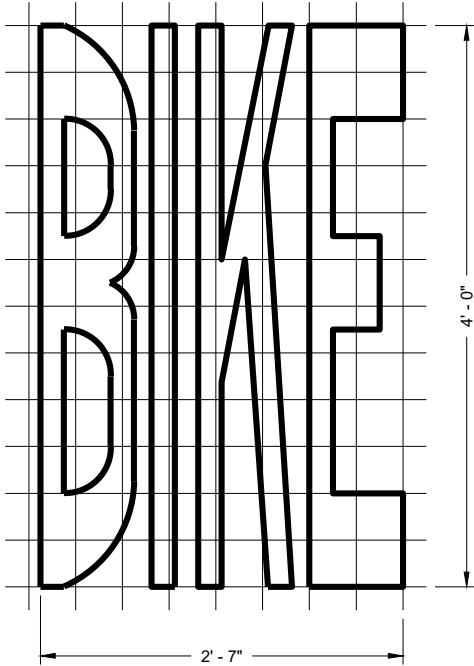


TYPE 7R

ROUNABOUT
MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

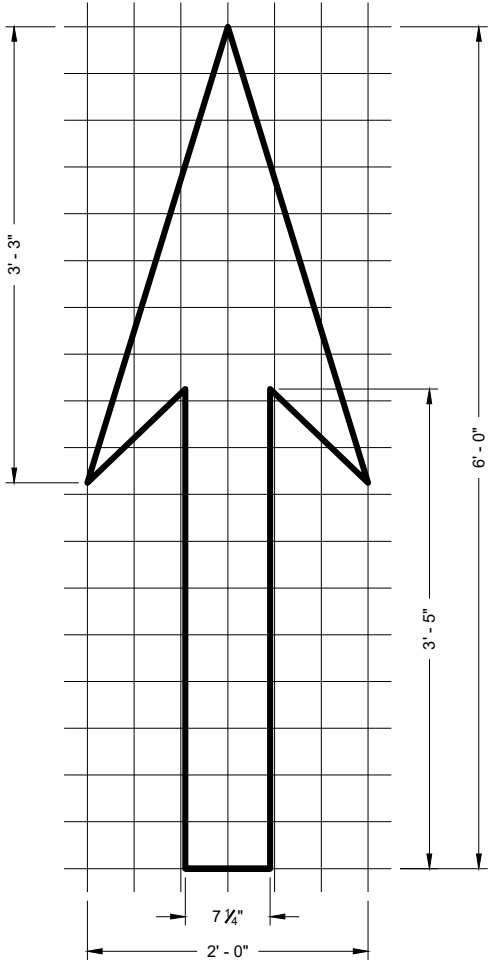
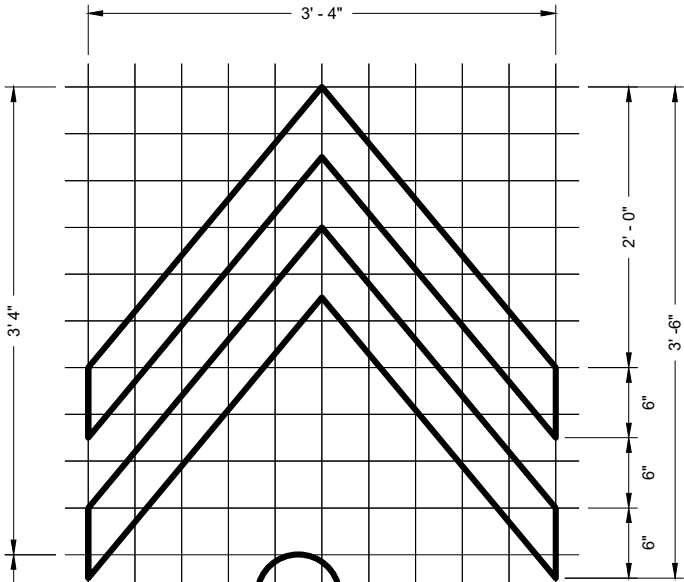
APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER
FHWA



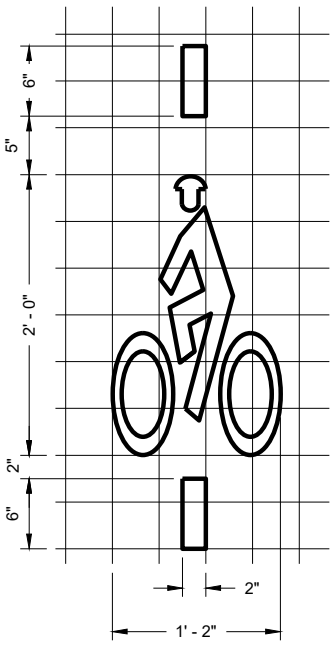
BIKE LANE WORDS

GENERAL NOTES

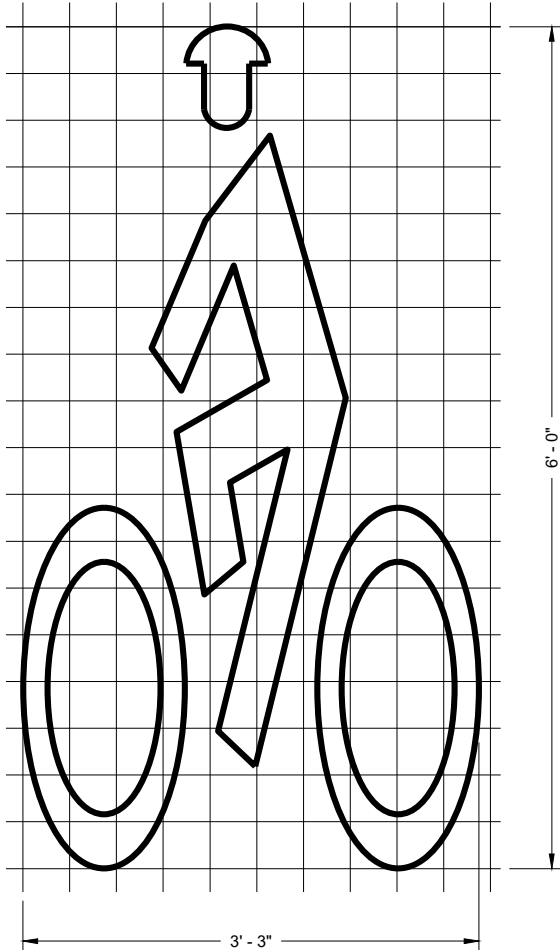
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



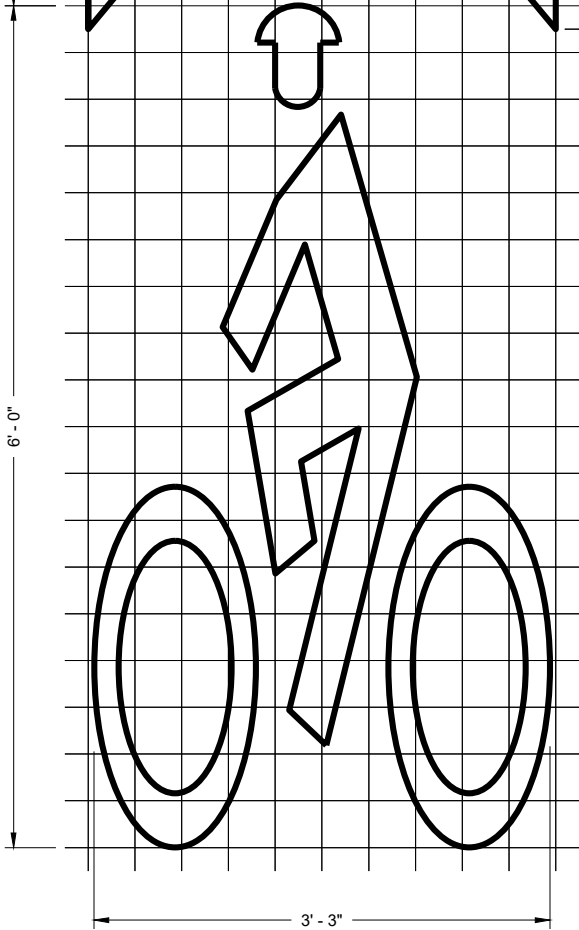
BIKE LANE ARROW



BICYCLE DETECTOR PAVEMENT MARKING



BIKE LANE SYMBOL



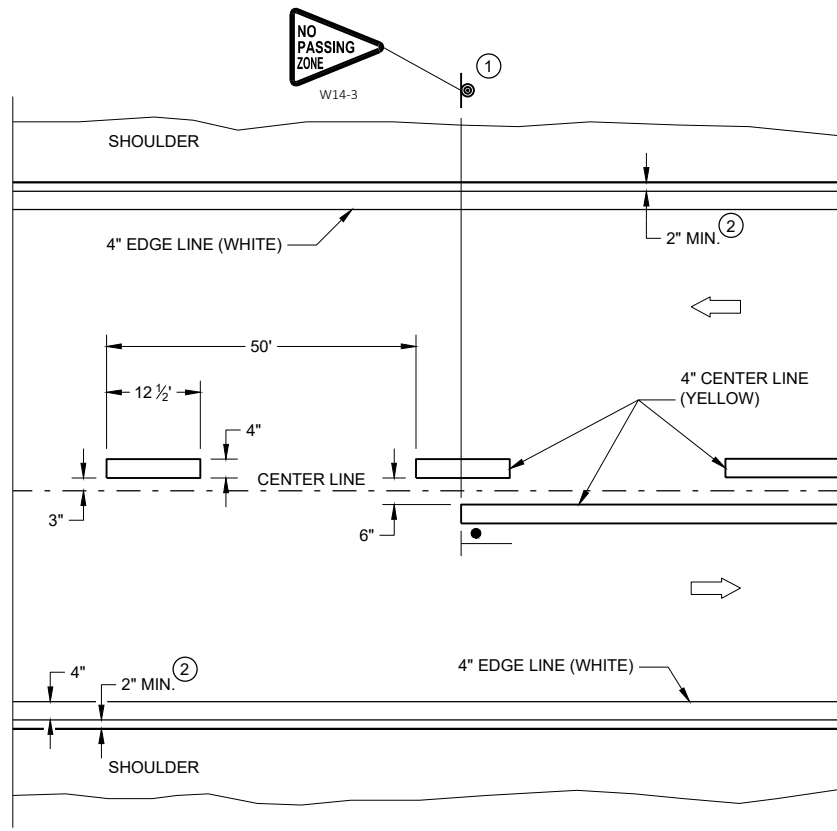
BIKE LANE SYMBOL FOR SHARED LANE

PAVEMENT MARKING FOR BIKE LANES

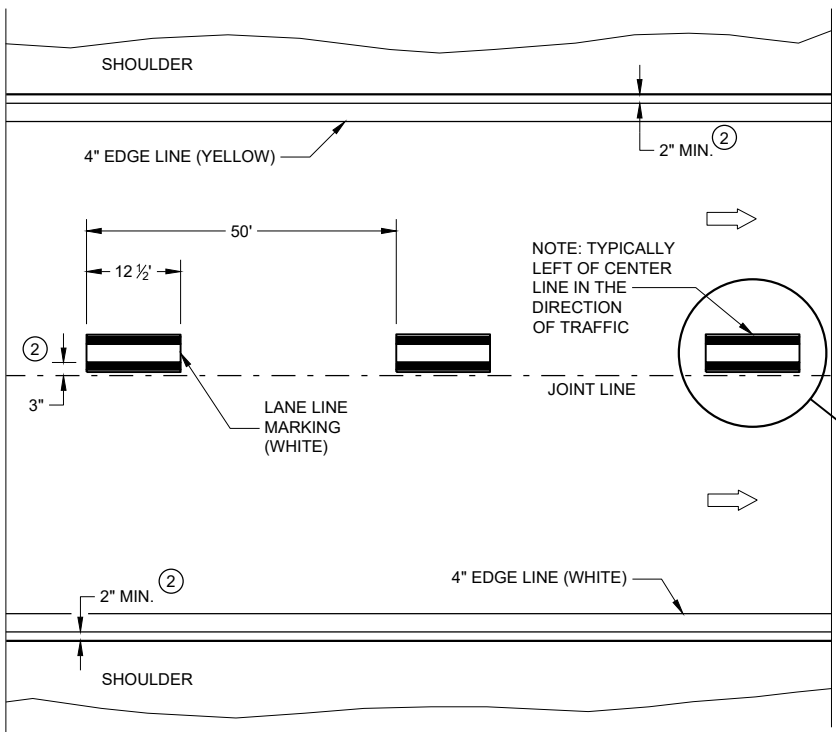
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER

SDD 15C08-a Longitudinal Marking (Mainline)

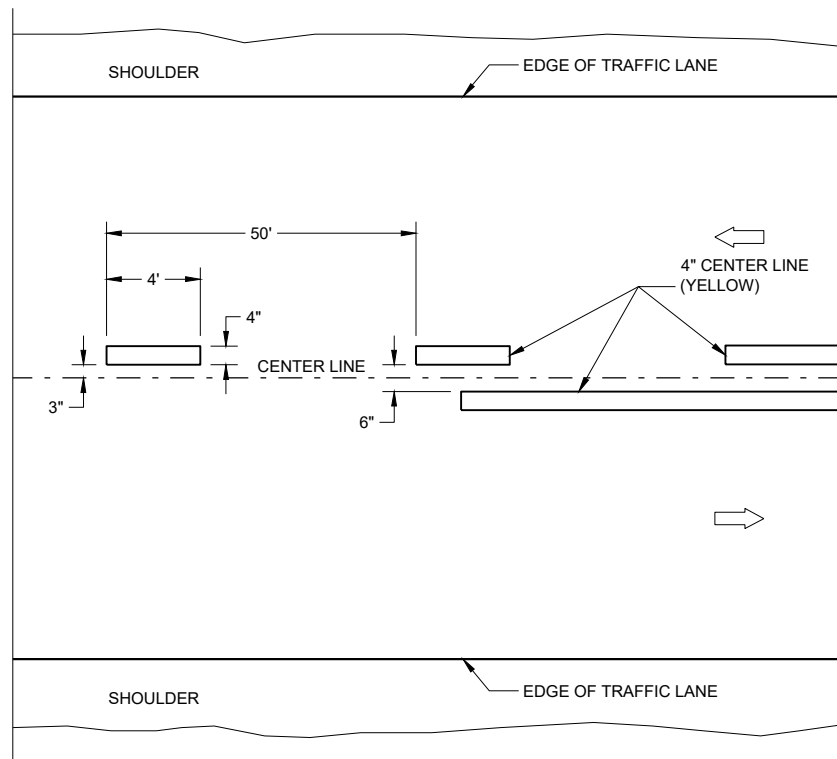


TWO WAY TRAFFIC

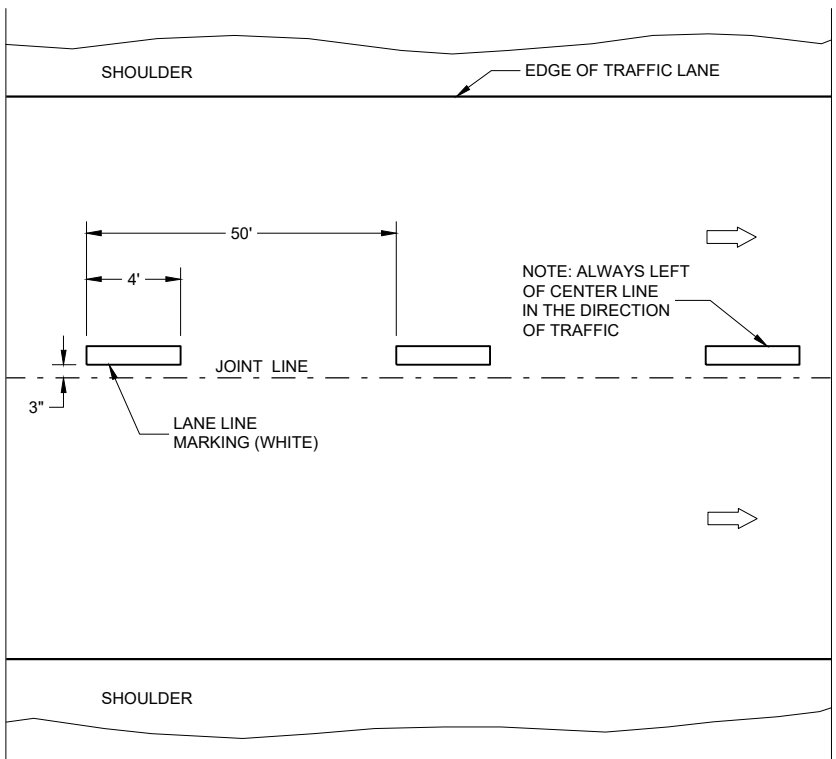


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

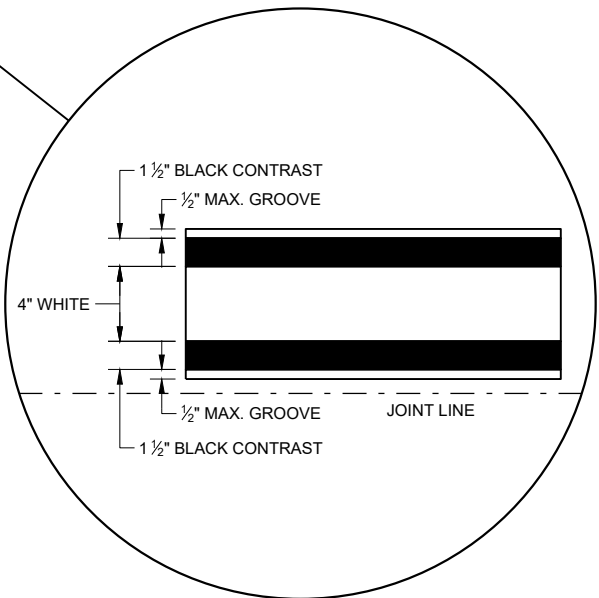
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- 1 LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- 2 MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND MARKING
ENGINEER

110

FHWA

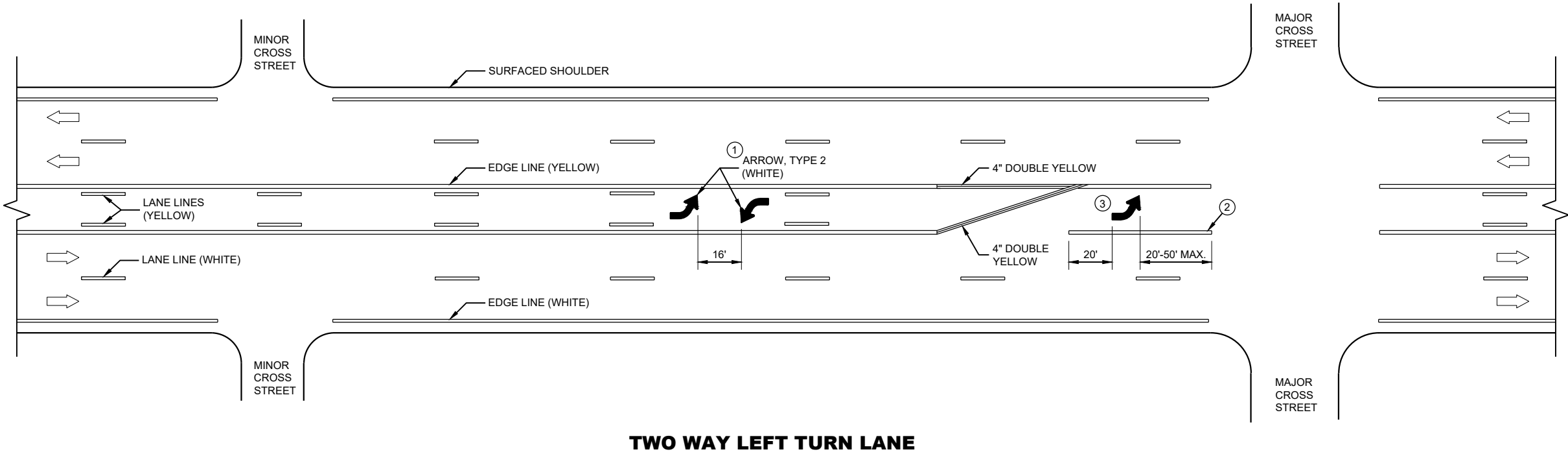


SDD 15C08-b Pavement Marking (Turn Lanes)

GENERAL NOTES

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 8" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC

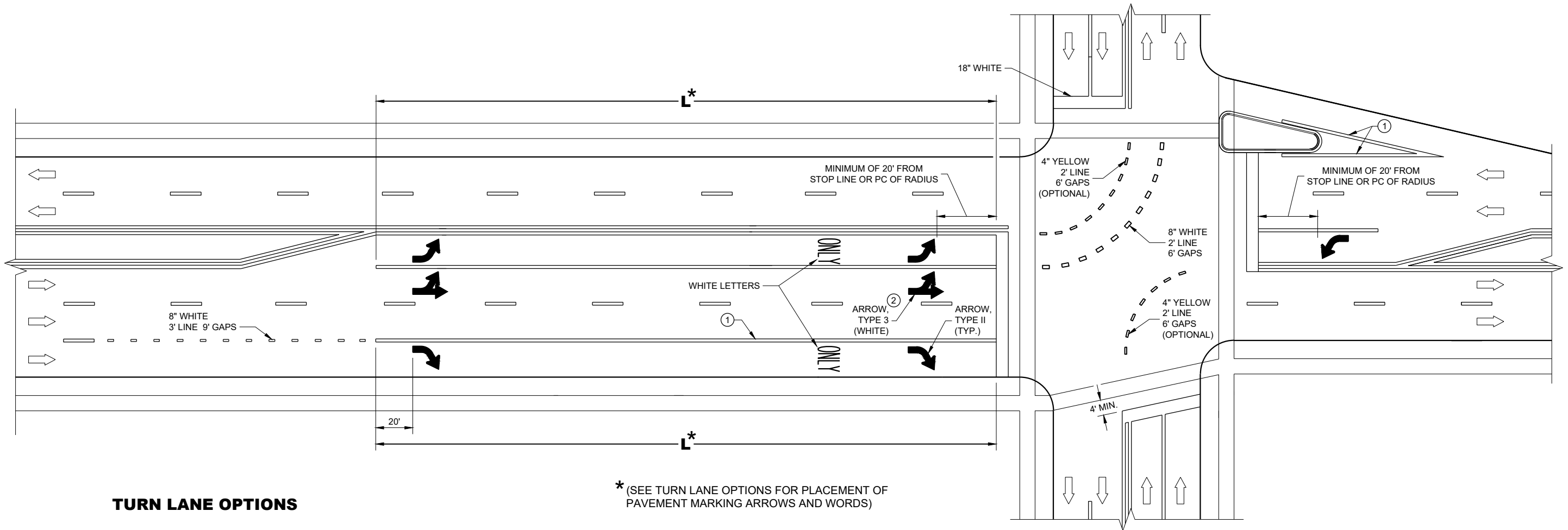


PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 111

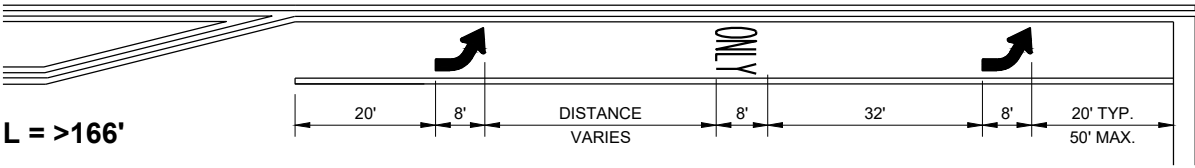
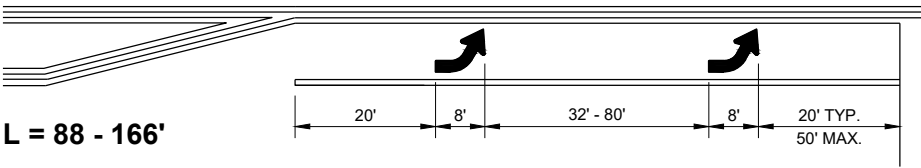
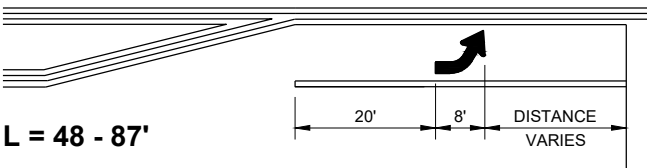
SDD 15C08 - 20b

SDD 15C08 - 20b



TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

→ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

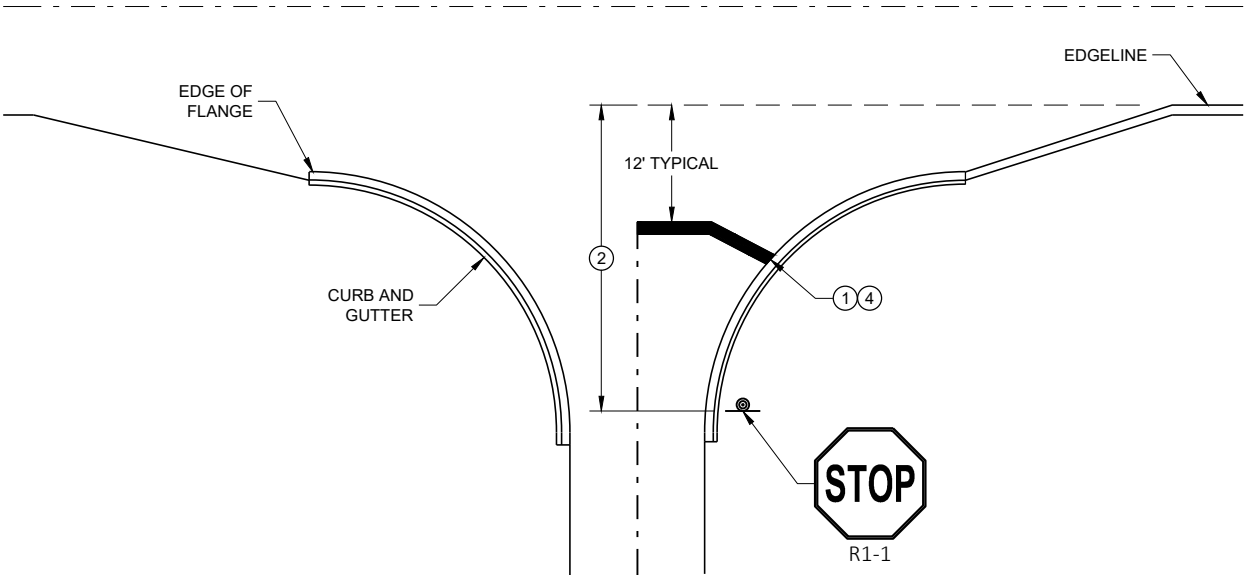
PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

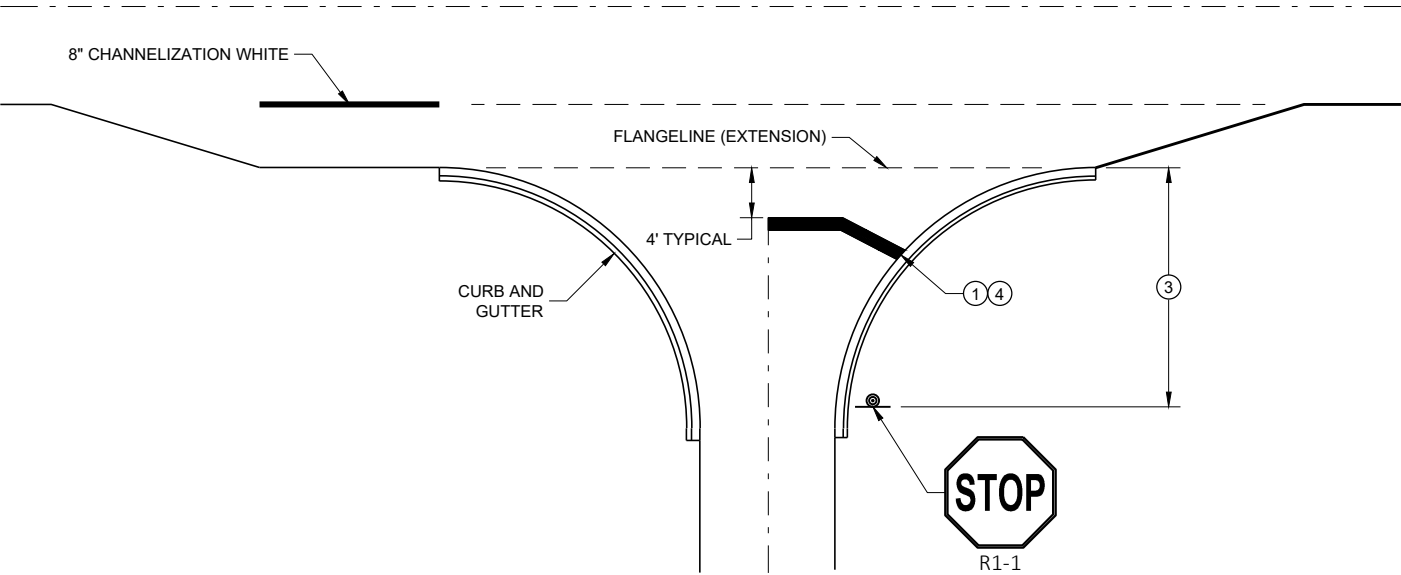
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

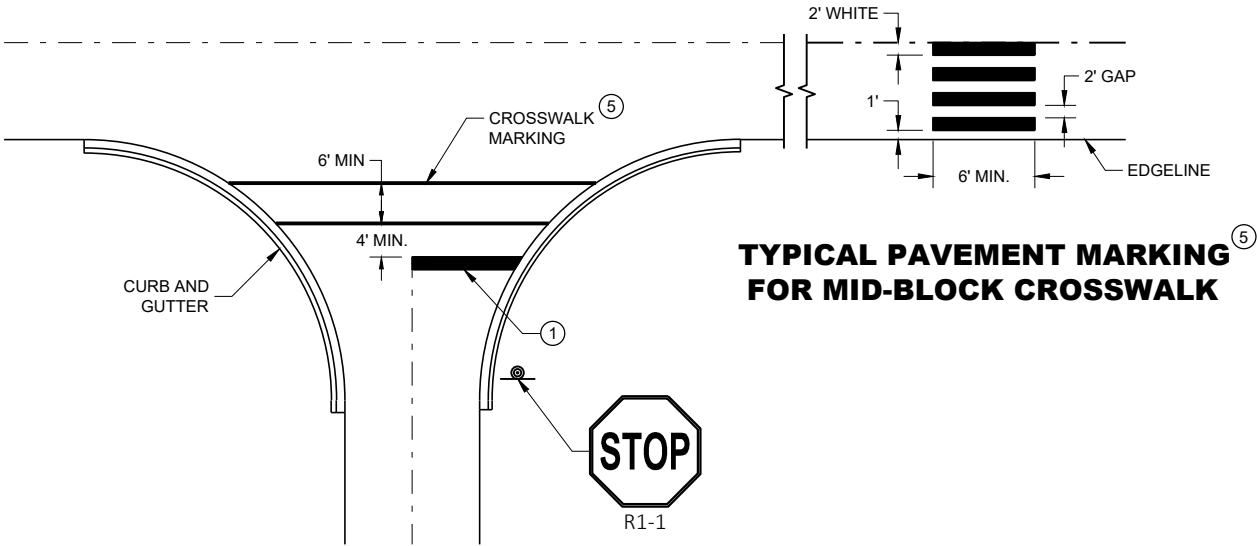
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



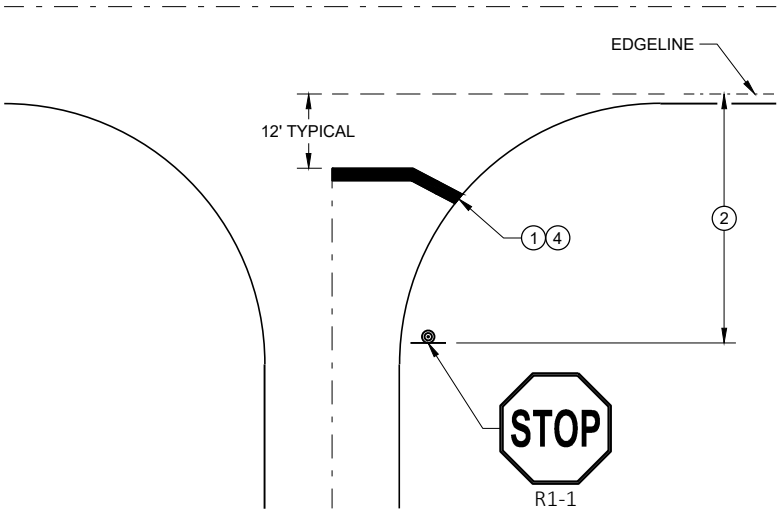
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

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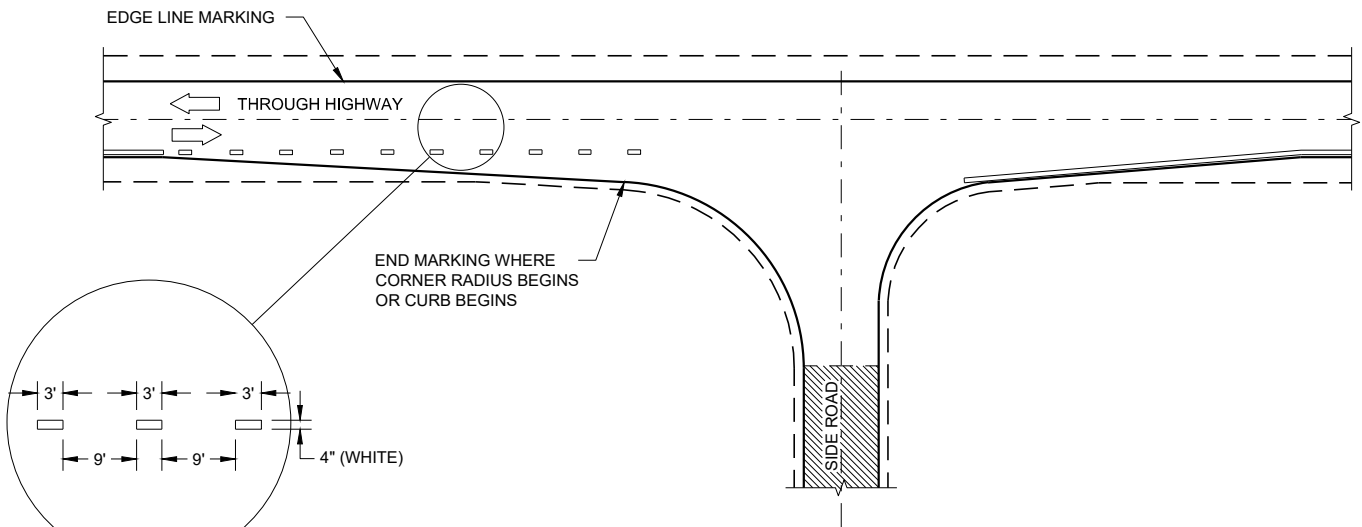
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

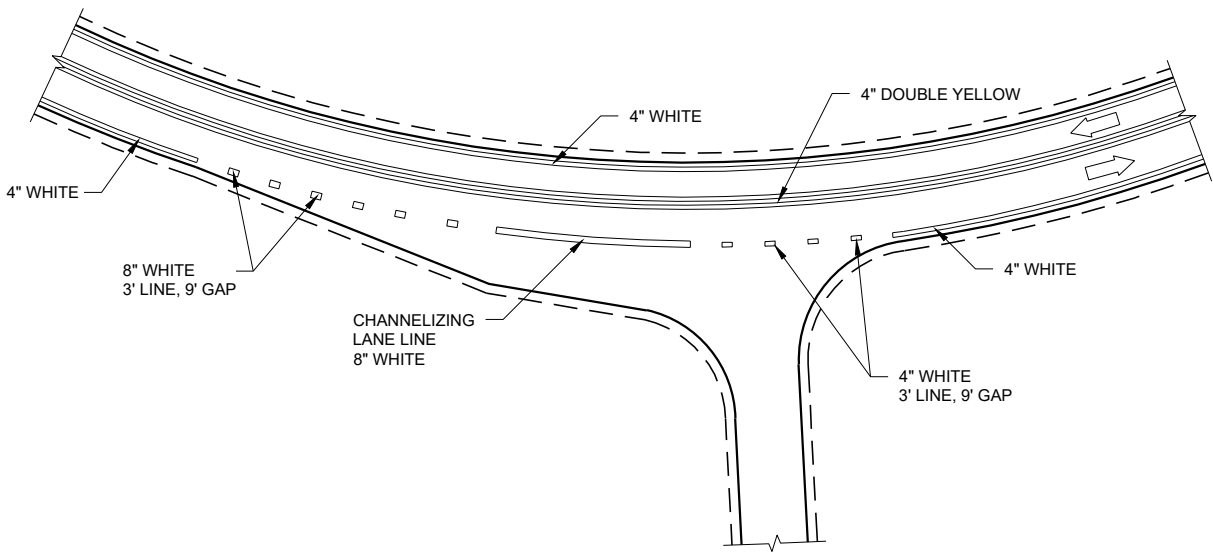
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

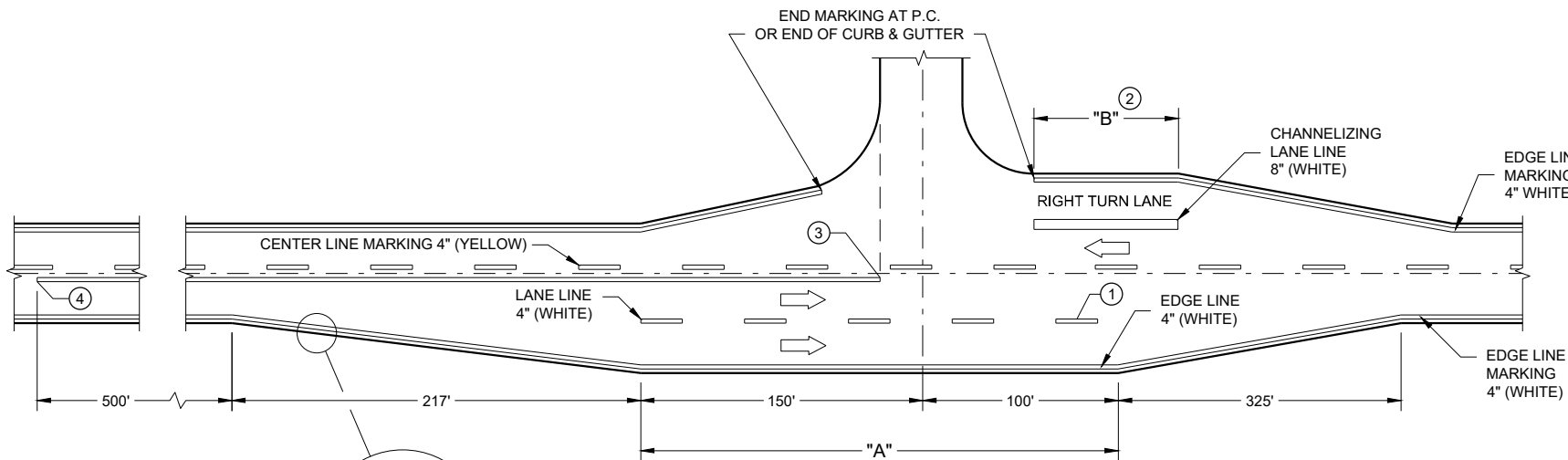
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION



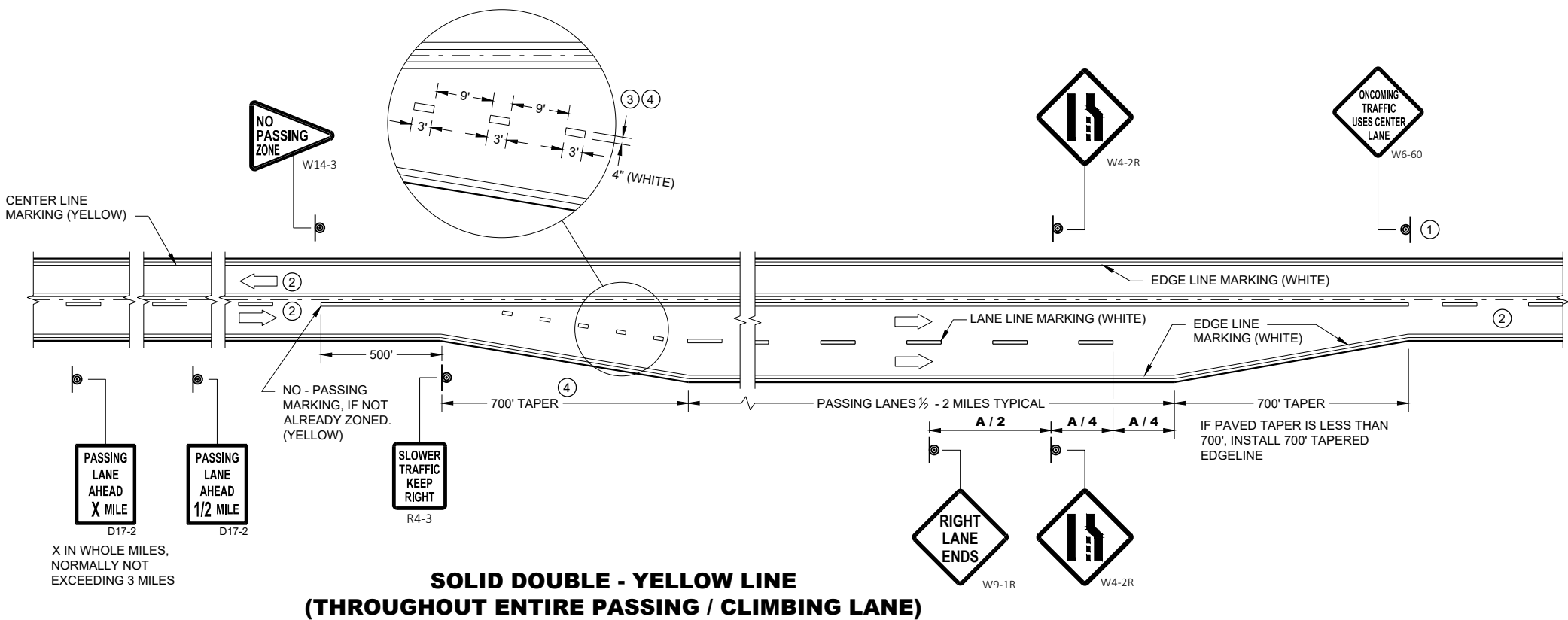
INTERSECTION ON OUTSIDE OF CURVE



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

PAVEMENT MARKING
(INTERSECTIONS)

SDD 15C35-b Pavement Marking and Signing, Climbing Lane and Passing Lane



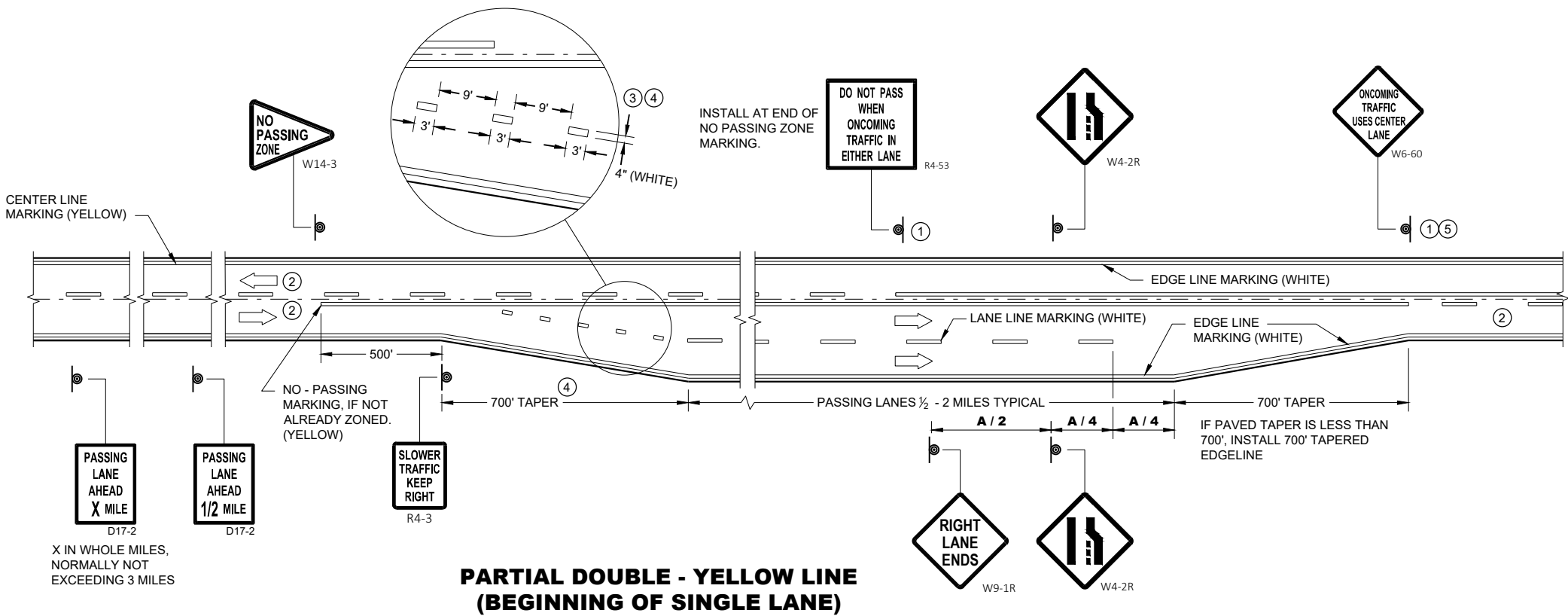
GENERAL NOTES

- 1 SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- 2 THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- 3 THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4 WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- 5 REPEAT EVERY 1 MILE UP UNTIL R4-53.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

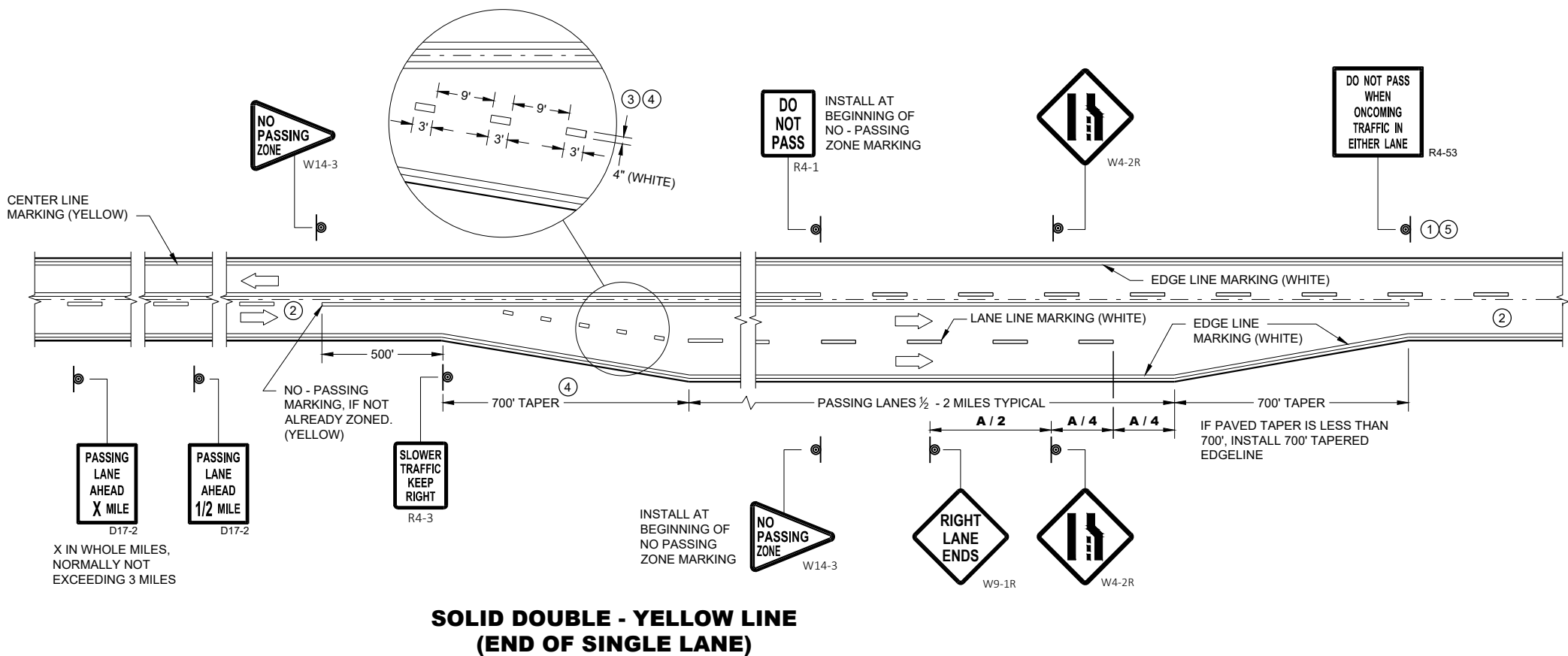
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990



**PAVEMENT MARKING & SIGNING
(CLIMBING LANE &
PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 115

SDD 15C35-c Pavement Marking and Signing, Climbing Lane and Passing Lane



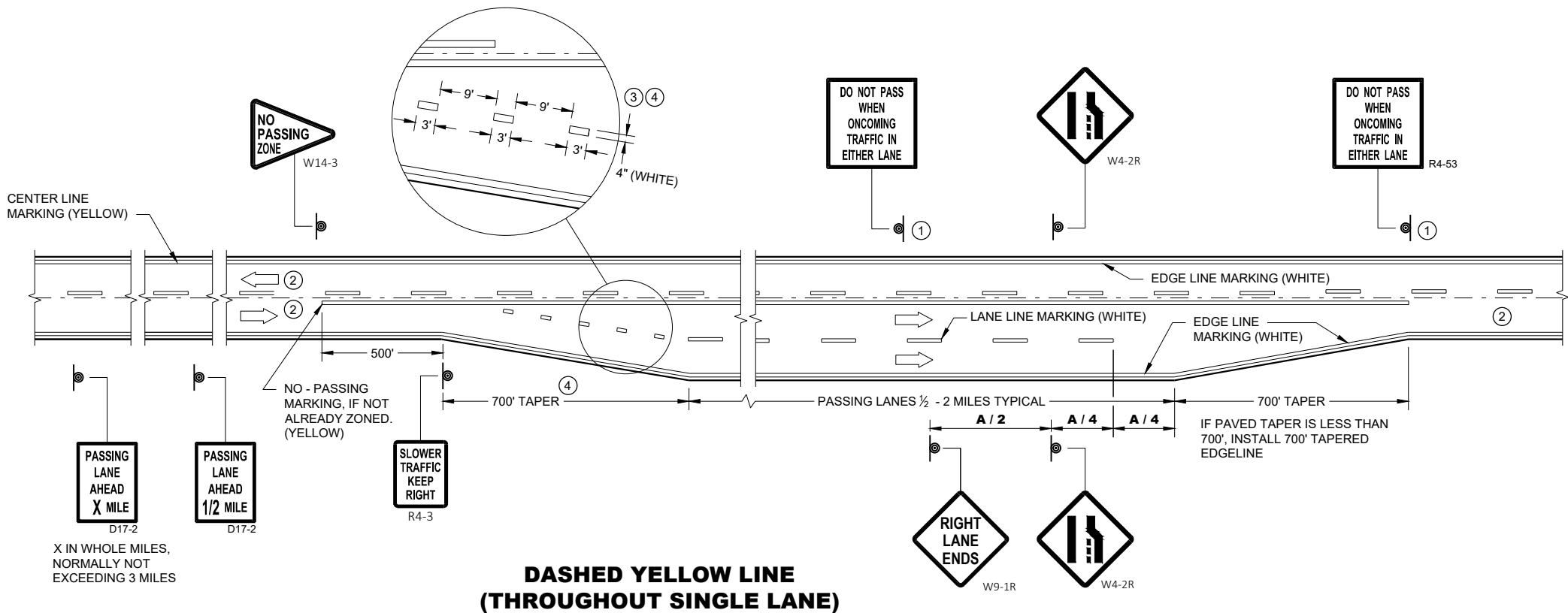
GENERAL NOTES

- 1 SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- 2 THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- 3 THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4 WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- 5 REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	775
50	885
55	990



PAVEMNET MARKING & SIGNING (CLIMBING LANE & PASSING LANE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

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SDD 15D20-a Traffic Control, Single Lane Closure, Divided Non-Freeway/Expressway

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

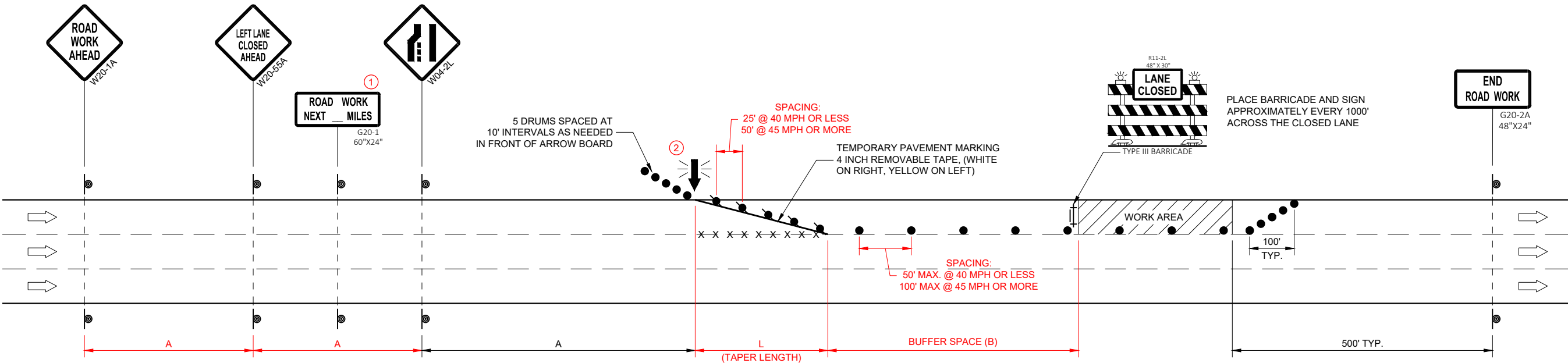
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE
/S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
117
FHWA

SDD 15D20 - 05a

SDD 15D20 - 05a



SDD 15D20-b Traffic Control, Single Right Lane Closure, Undivided Non-Freeway/Expressway

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

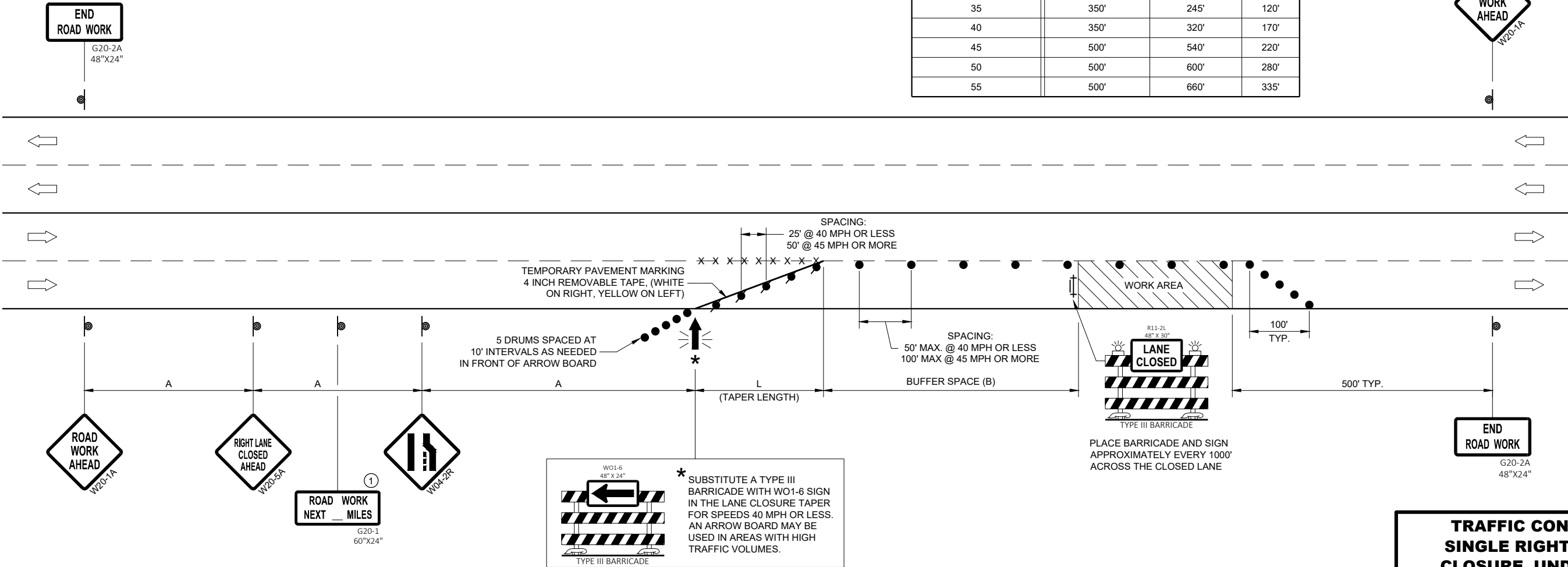
① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

6

6

SDD 15D20 - 05b

SDD 15D20 - 05b



TRAFFIC CONTROL, SINGLE RIGHT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

118

FHWA



SDD 15D20-c Traffic Control, Single Left Lane Closure, Undivided Non-Freeway/Expressway

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

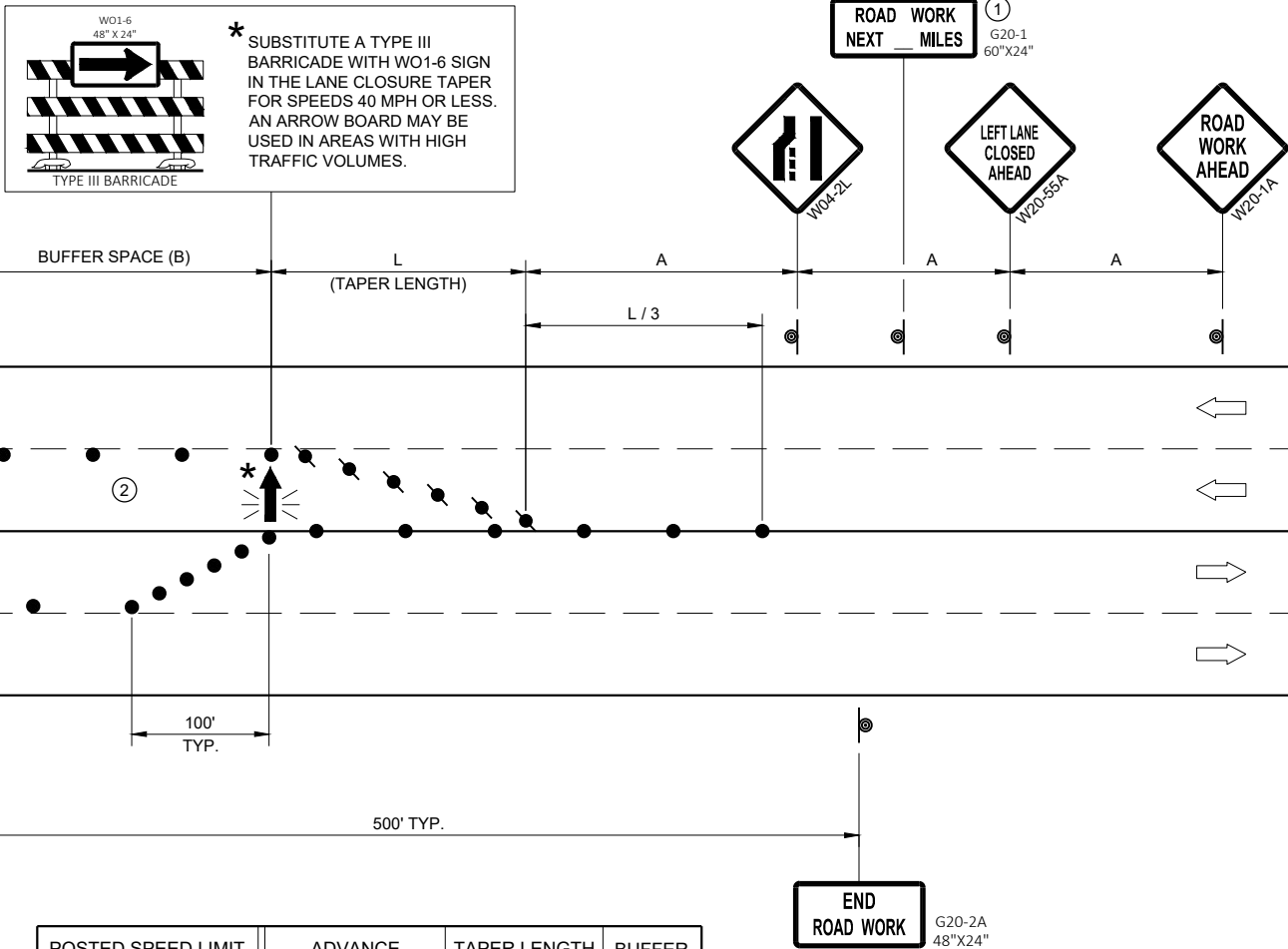
DUE TO LACK OF SHOULDER/MEDIAN, ARROW BOARD IS PLACED AT THE THE END OF THE TAPER.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

- ① OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ② LANE MAY BE OPENED WHEN WORKERS ARE NOT PRESENT IN THE WORK AREA.



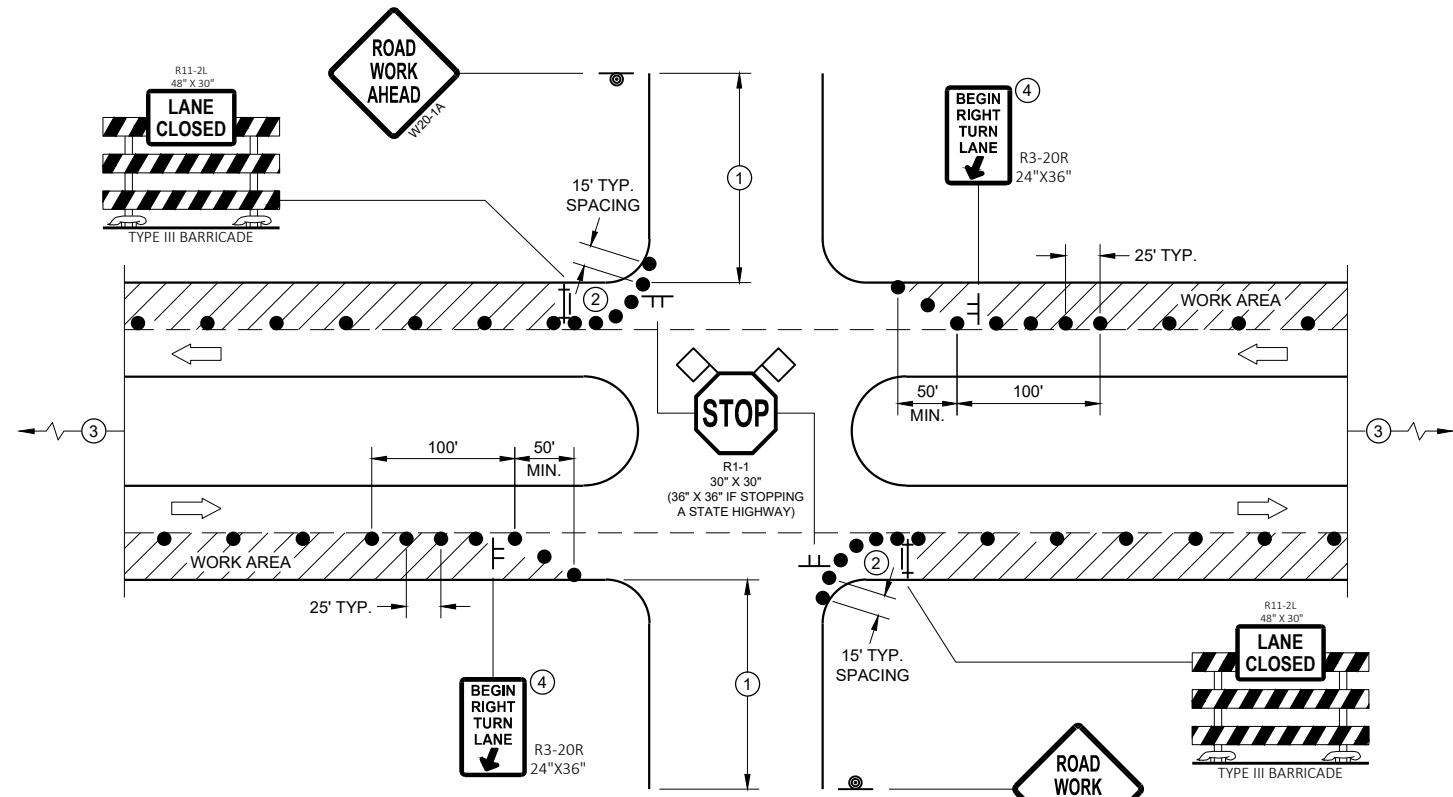
POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'
50	500'	600'	280'
55	500'	660'	335'

TRAFFIC CONTROL, SINGLE LEFT LANE CLOSURE, UNDIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020 /S/ Andrew Heidtke
DATE STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

119



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR RIGHT LANE CLOSURE AT INTERSECTION

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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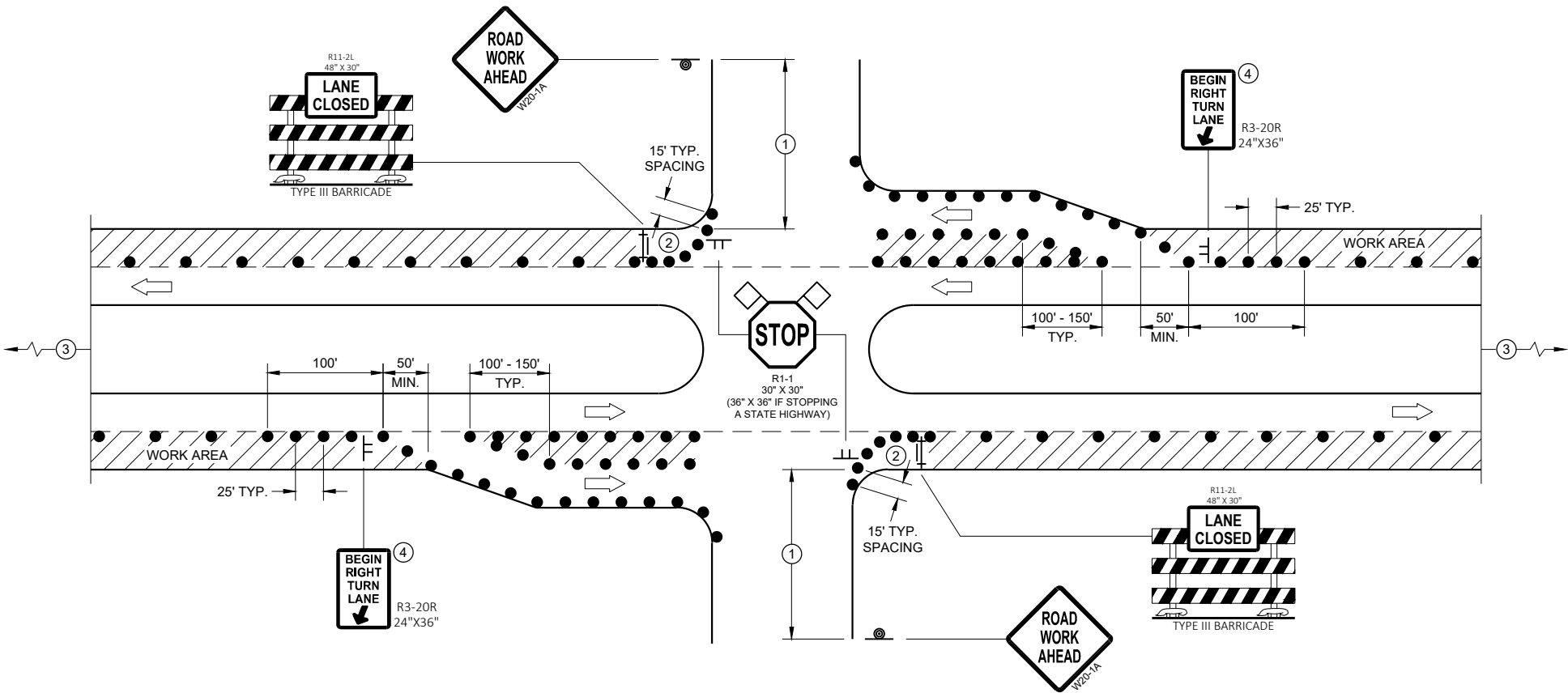
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ② ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- ④ MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

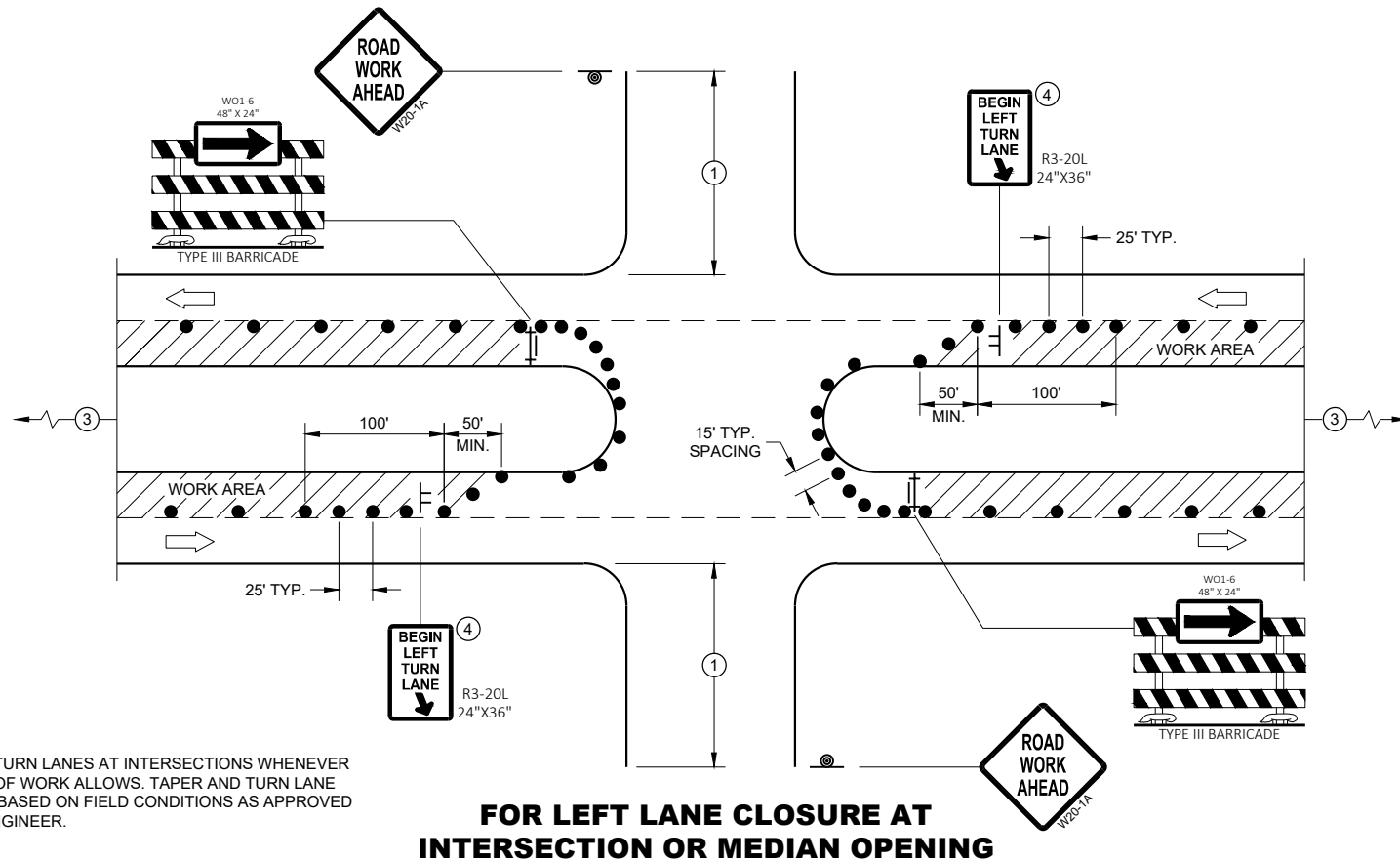
LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- ◇ FLAGS, 16" X 16" MIN., ORANGE
- ▨ WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 120

SDD 15D21-b Traffic Control, Intersection Within Single Left Lane Closure



GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON COVERED OR "DOWNED" SIGNS.

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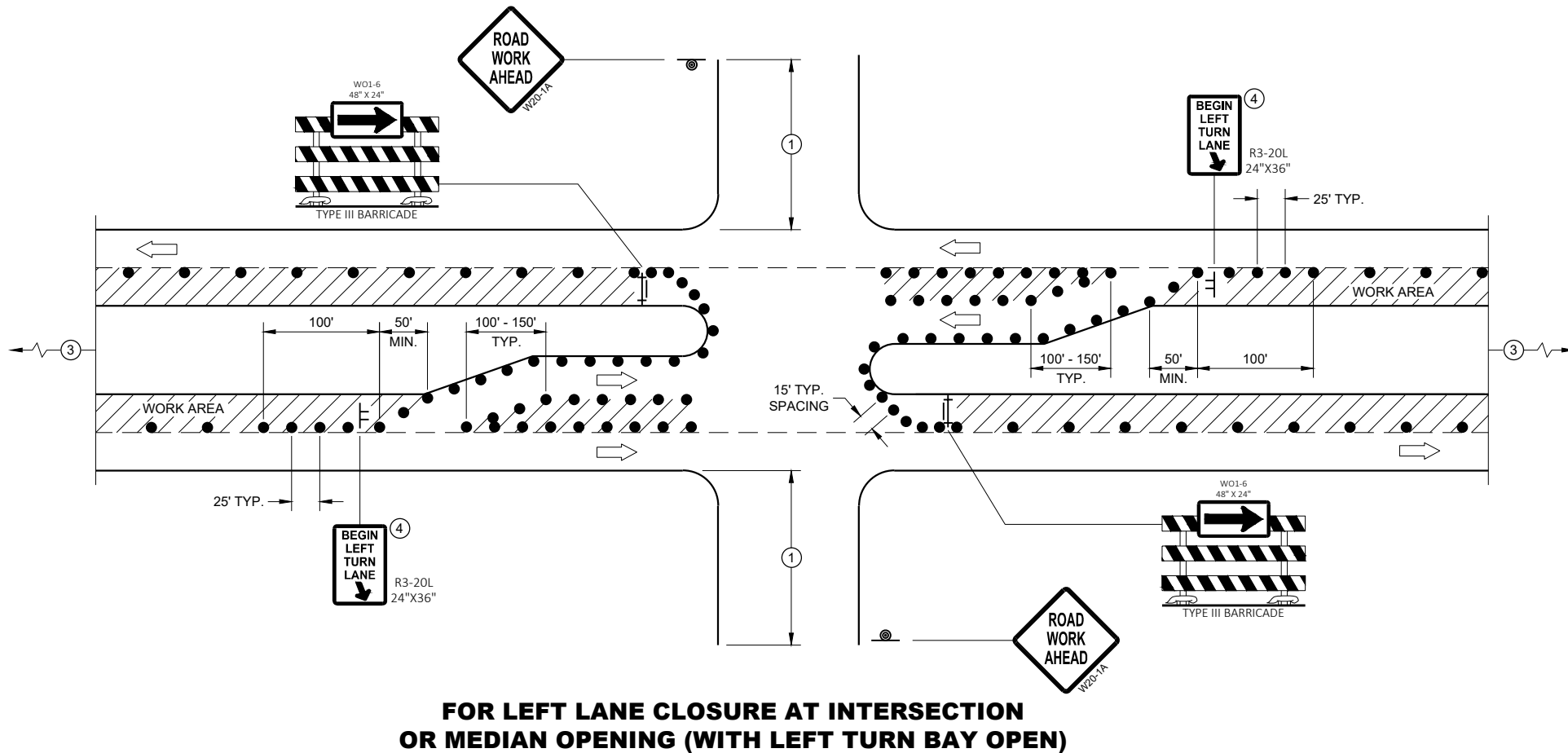
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

- 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.
- ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS
- SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.
- MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

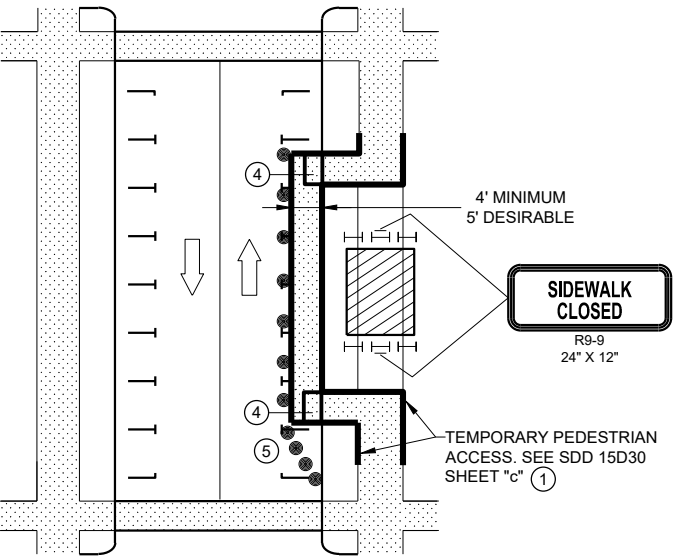


LEGEND

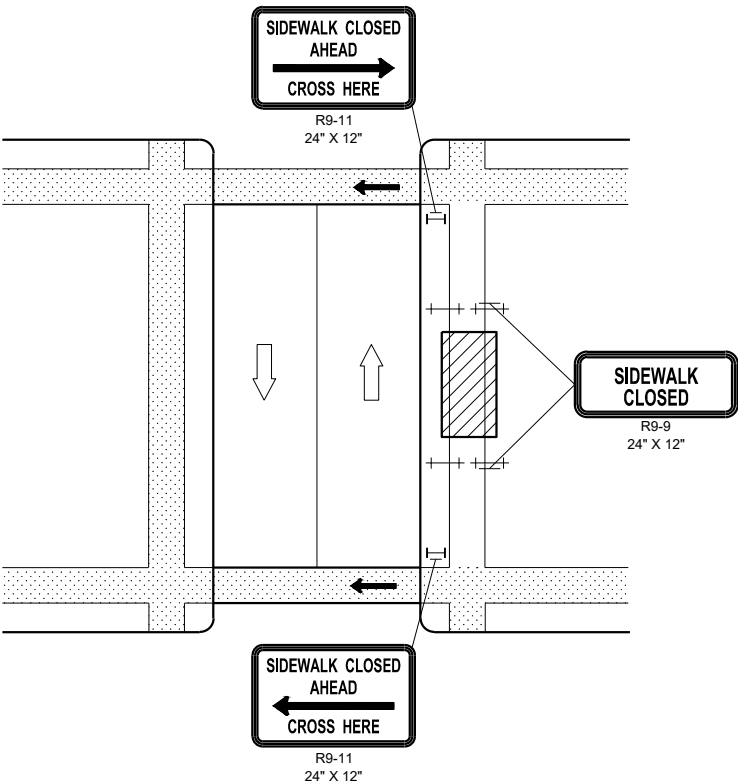
- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED August 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER	121
FHWA		

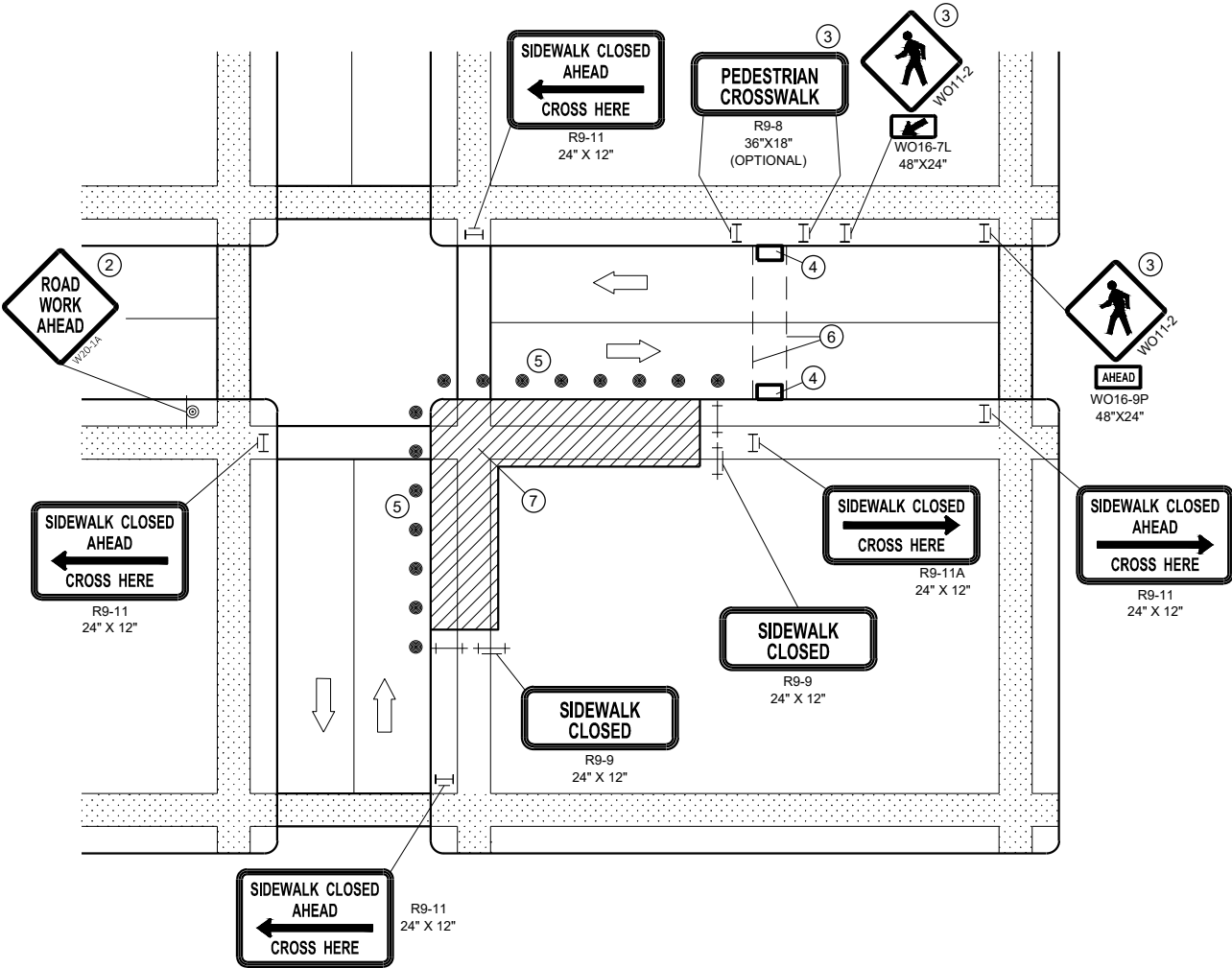
NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.



MID-BLOCK SIDEWALK CLOSURE
IN PARKING LANE

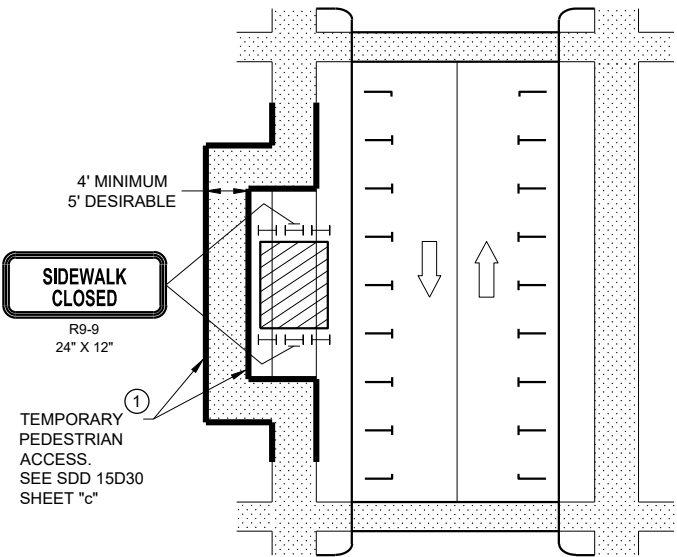


MID-BLOCK SIDEWALK
CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN, EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

- ① IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
- ② "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
- ③ IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- ④ TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b'.
- ⑤ DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- ⑥ TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- ⑦ LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

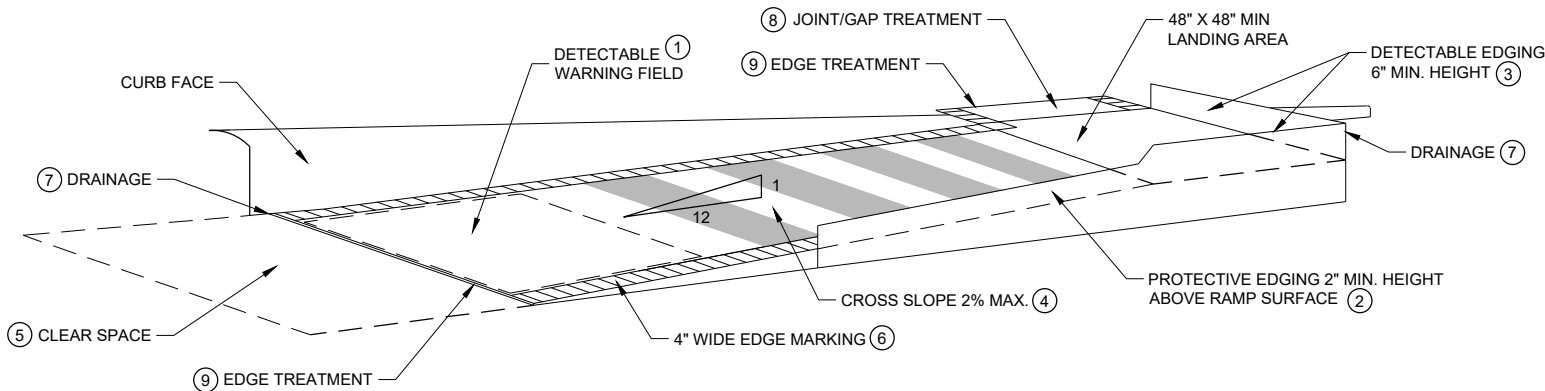
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

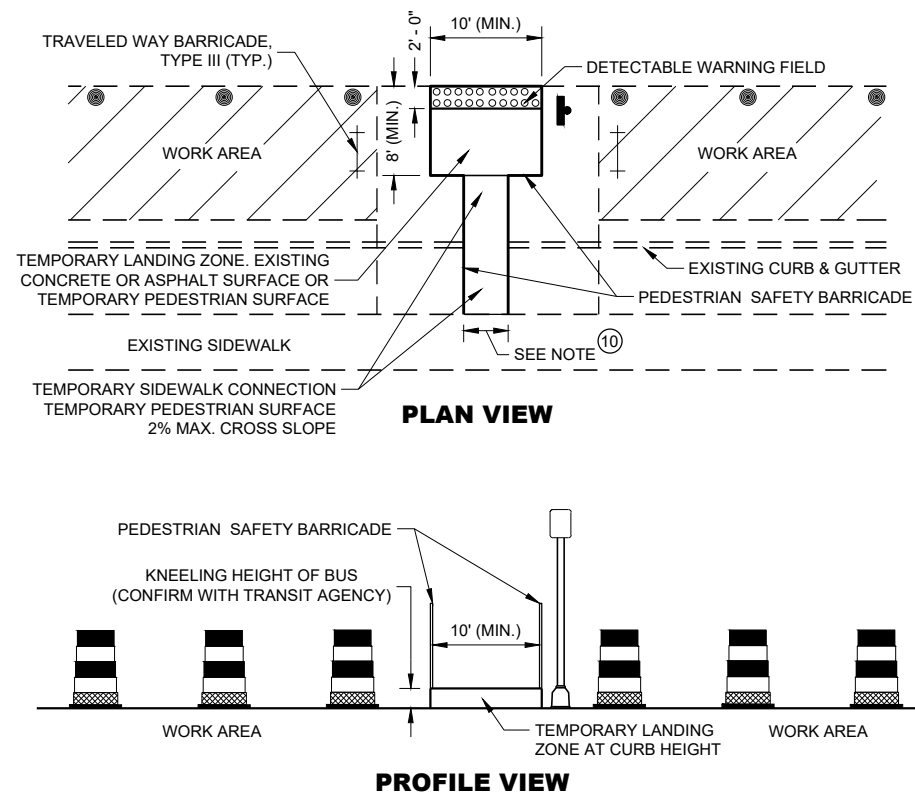
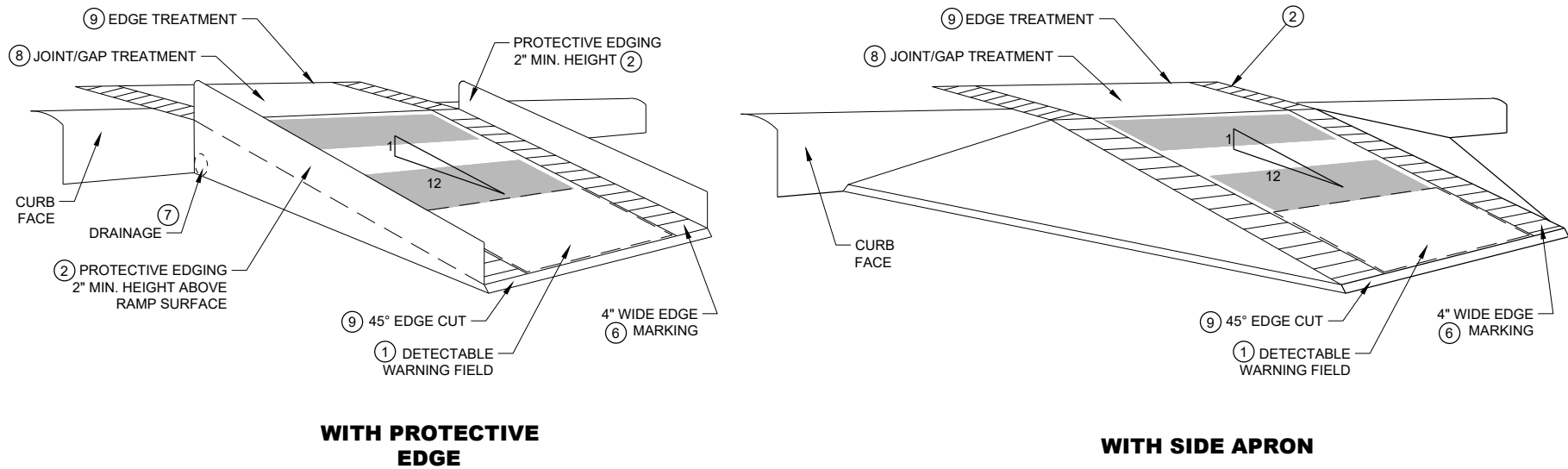
GENERAL NOTES

- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
- ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.
- ① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 08D05, SHEET "e".
 - ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
 - ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
 - ④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
 - ⑤ CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
 - ⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
 - ⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
 - ⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.
 - ⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES SHALL BE VERTICAL UP TO ¼" HIGH AND BEVELED AT 1:2 BETWEEN ¼" AND ½".
 - ⑩ 5' WIDE MIN. WITH PEDESTRIAN SAFETY BARRICADE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY BARRICADE.

TEMPORARY CURB RAMP PARALLEL TO CURB



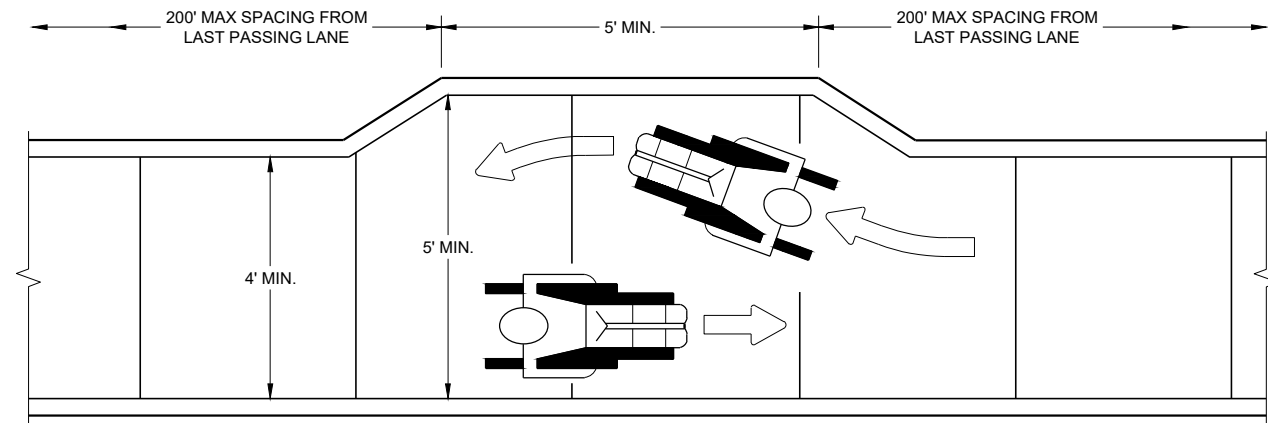
TEMPORARY CURB RAMP PERPENDICULAR TO CURB



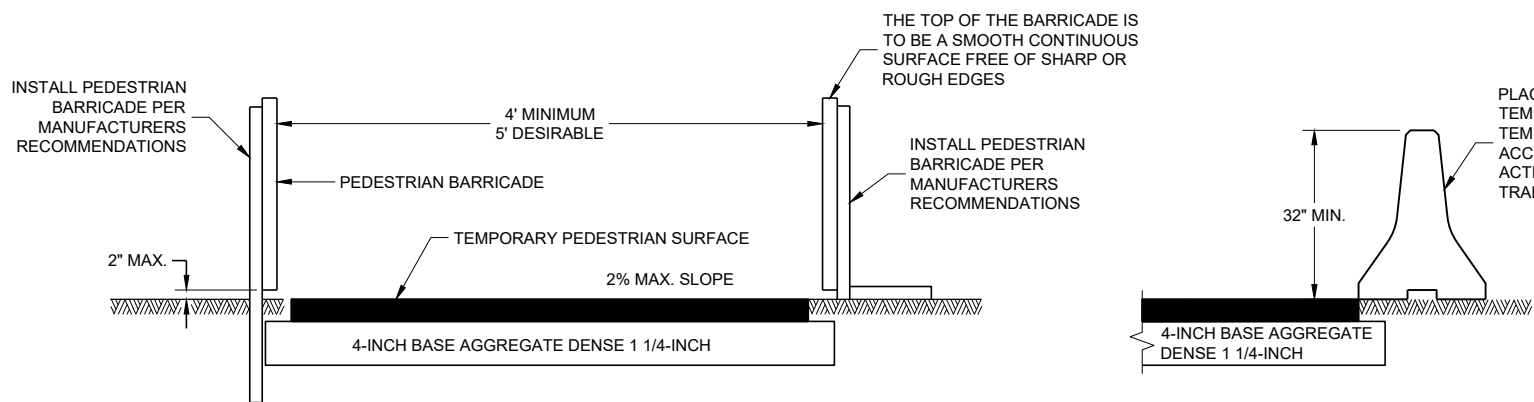
LEGEND

- TRAFFIC CONTROL DRUM
- ⊥ TYPE III BARRICADE
- ▨ WORK AREA

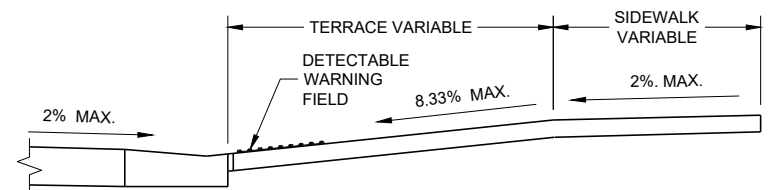
TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION



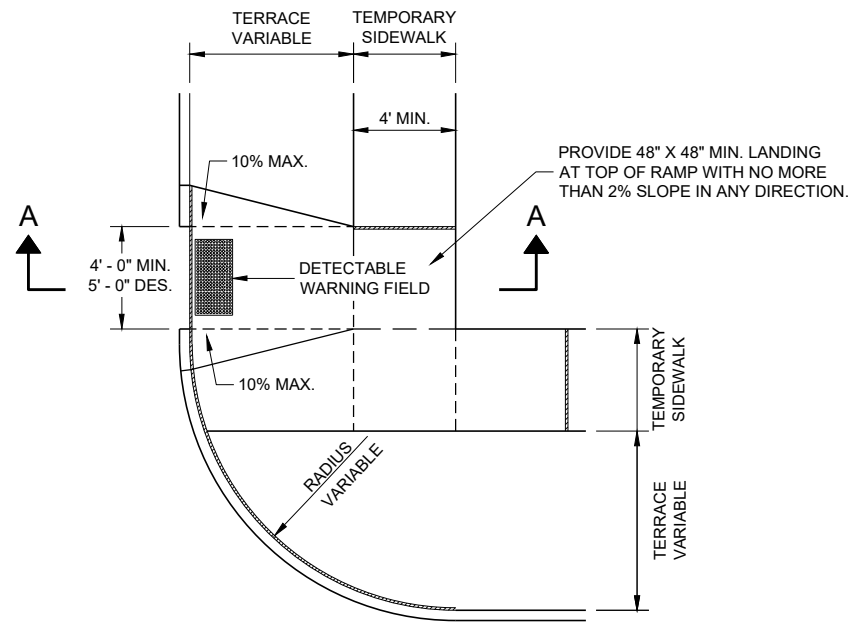
NARROW SIDEWALK PASSING DETAIL



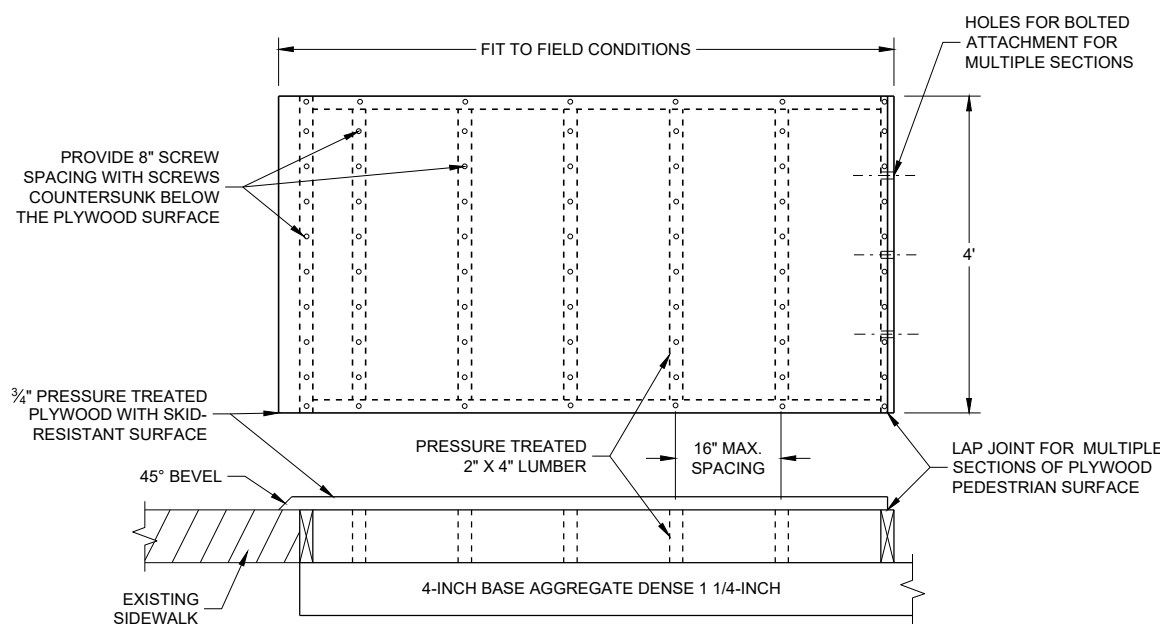
TEMPORARY PEDESTRIAN ACCESS



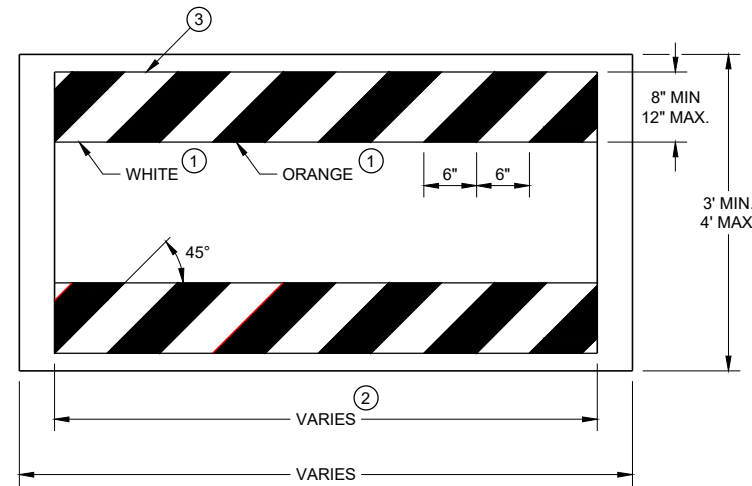
SECTION A - A



**PLAN VIEW
TEMPORARY TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)**



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



TEMPORARY PEDESTRIAN BARRICADE*

GENERAL NOTES

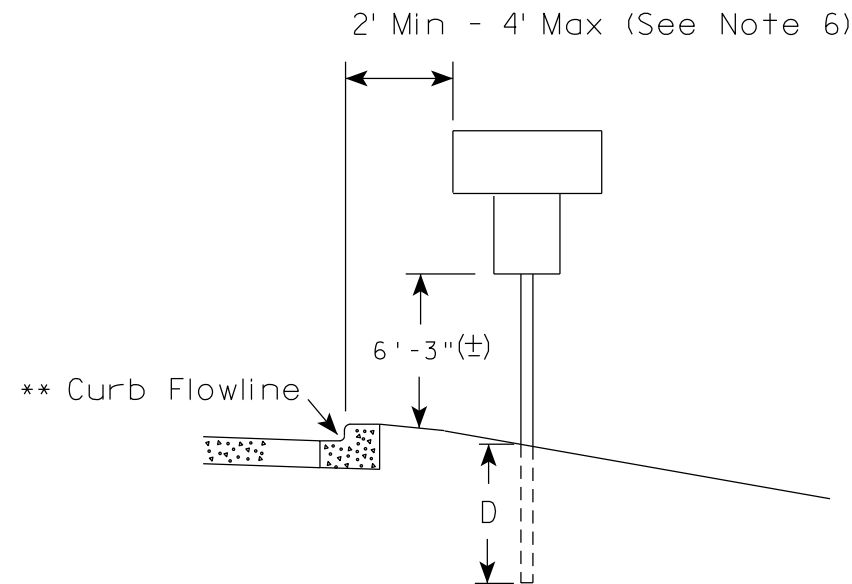
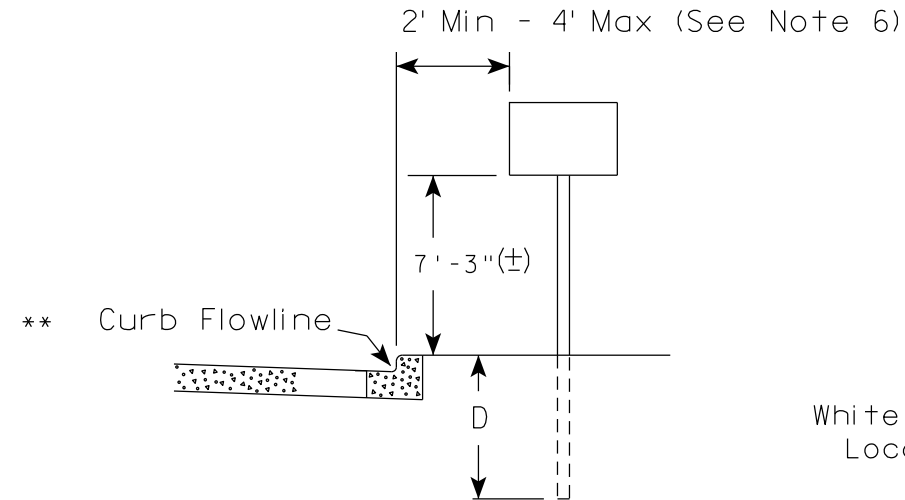
- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- * USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

**TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

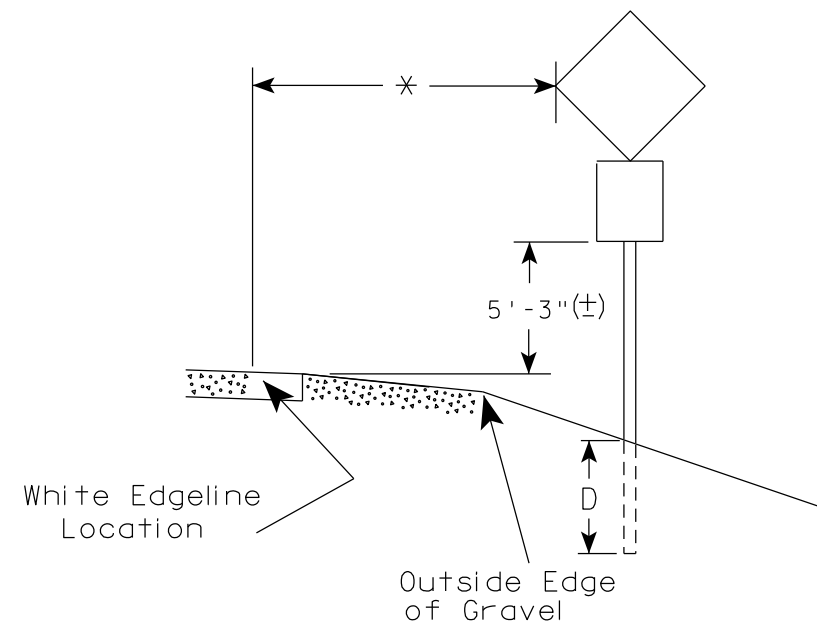
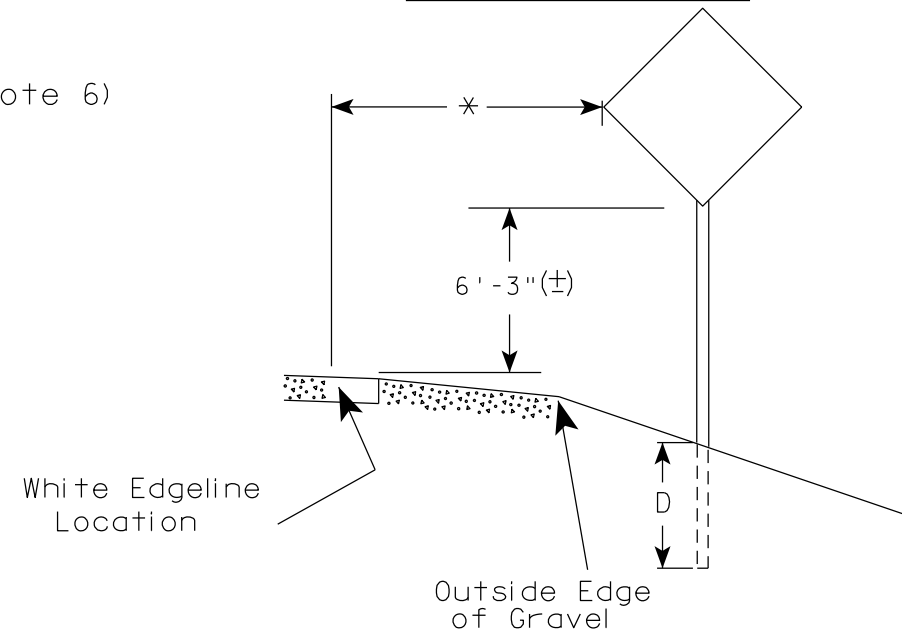
APPROVED
November 2019 /S/ Andrew Heidtke 124
DATE WORK ZONE ENGINEER
FHWA

URBAN AREA



✱✱ The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

RURAL AREA (See Note 2)



✱ 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
- For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- The (±) tolerance for mounting height is 3 inches.
- Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

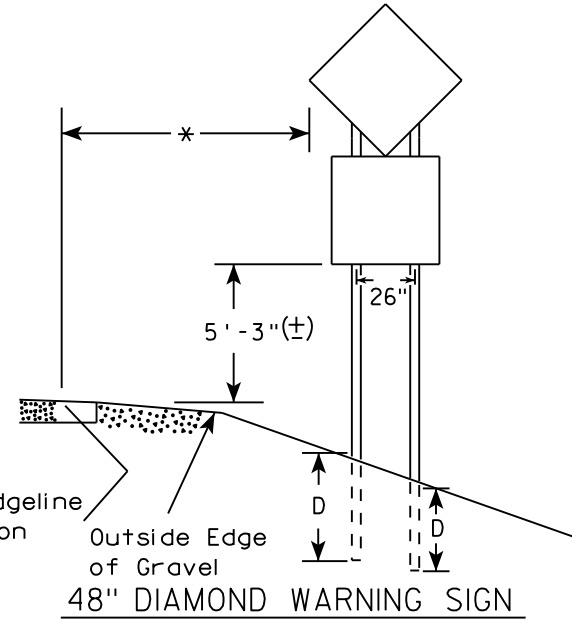
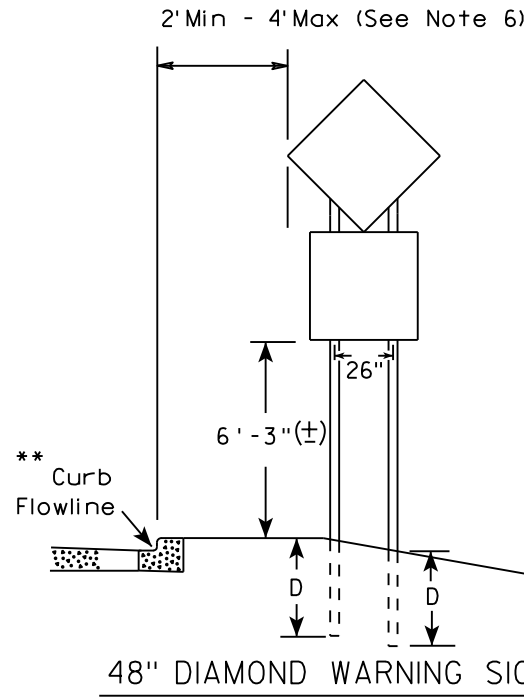
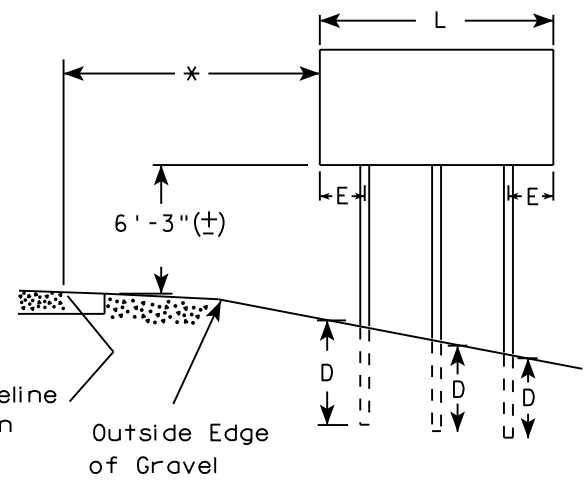
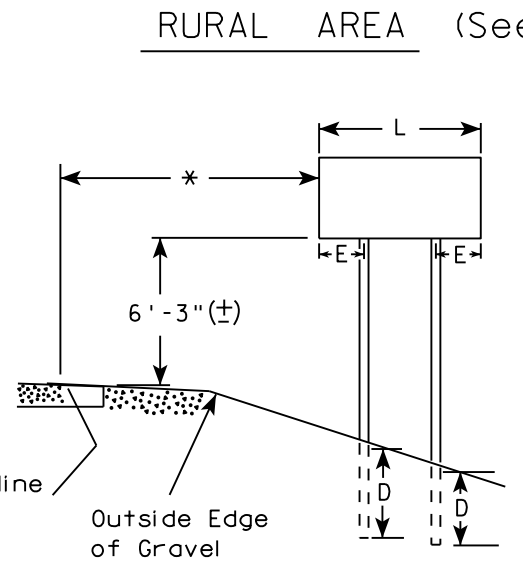
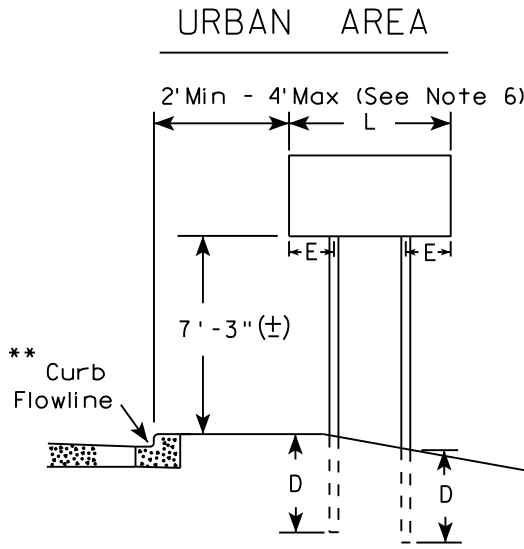
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 125

E



- GENERAL NOTES
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. J-Assemblies are considered to be one sign for mounting height.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

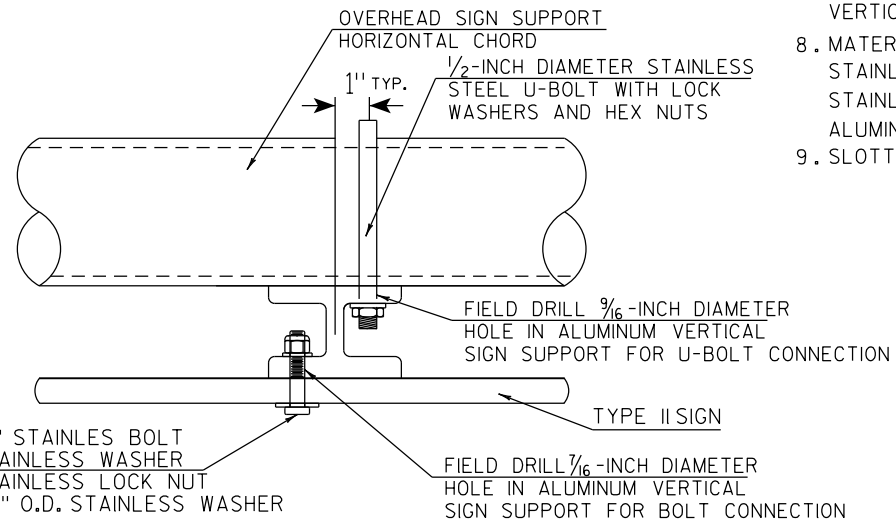
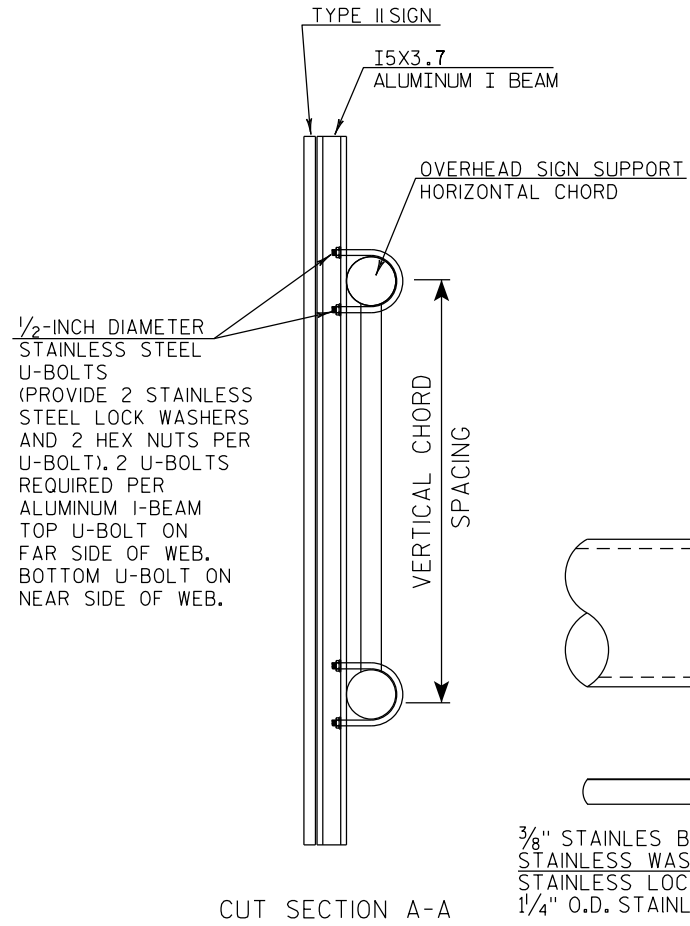
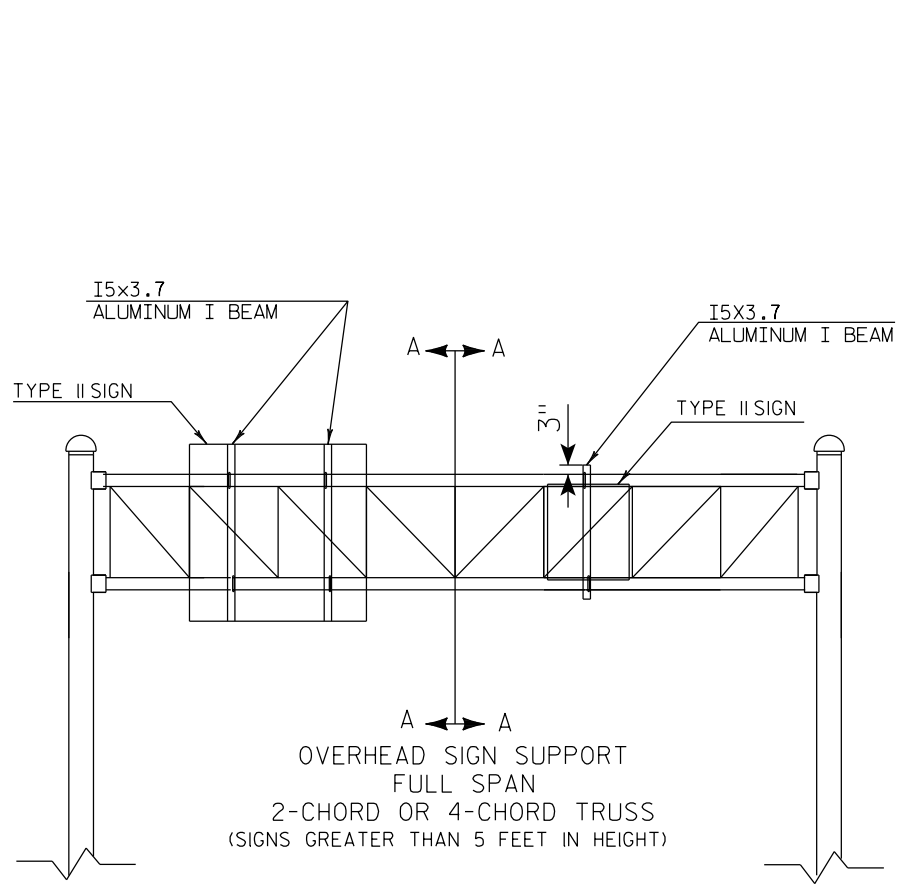
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

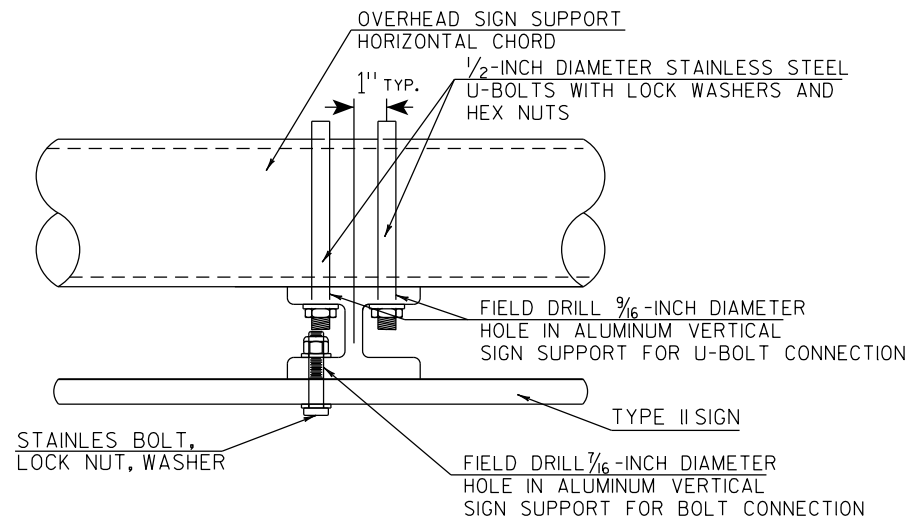
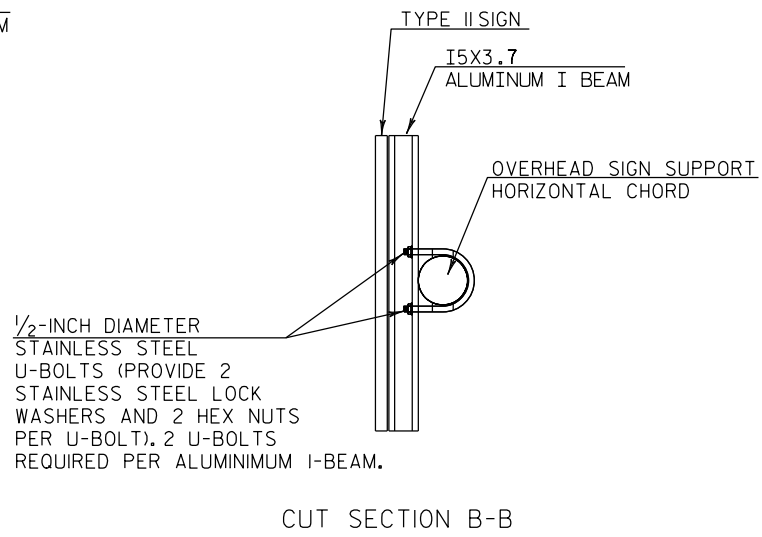
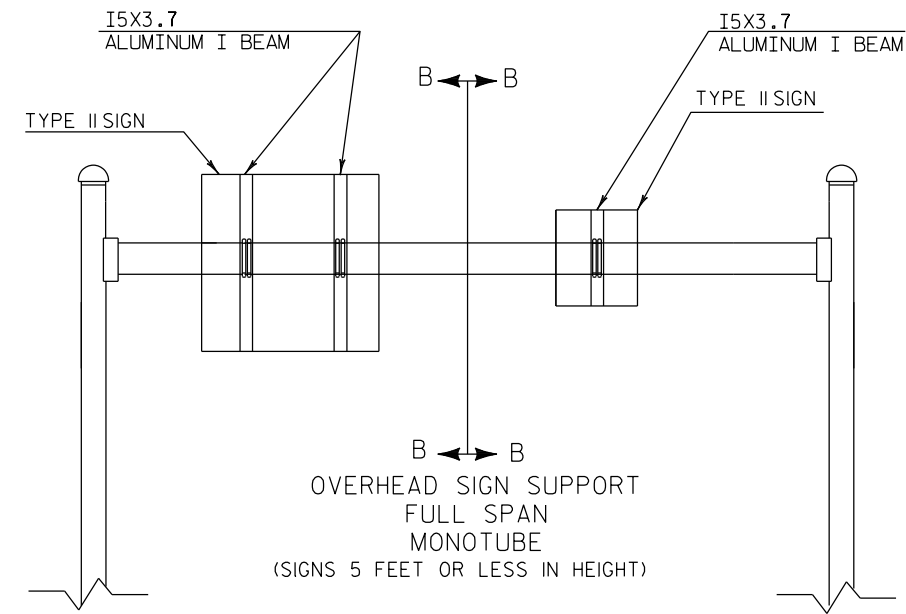
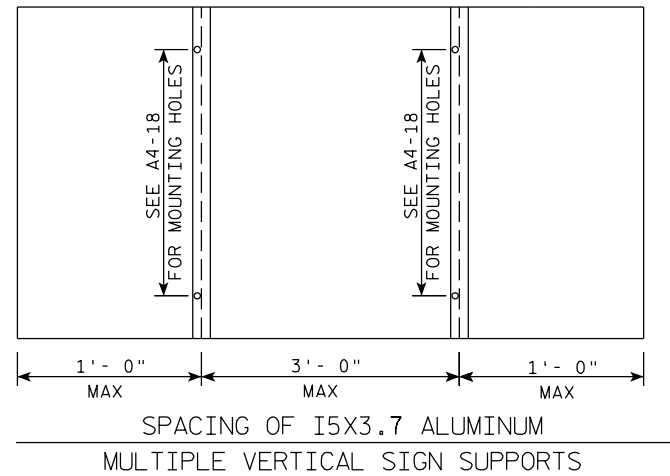
DATE 8/21/17 PLATE NO. A4-4.15

GENERAL NOTES

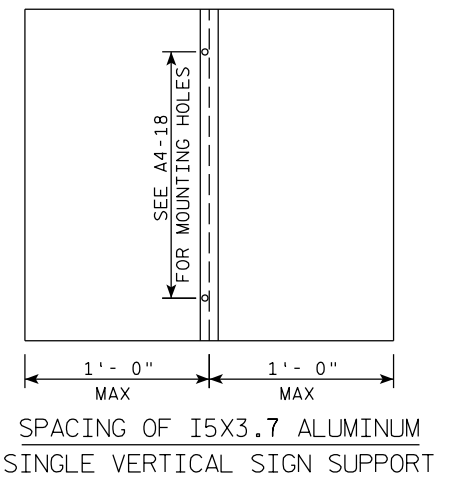
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE STAINLESS BOLTS AT BOLT HOLES IN SIGN PANEL PER SIGN PLATE A4-18.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE CHORDS OF THE OVERHEAD SIGN STRUCTURE.
5. DIAMETER OF U-BOLTS SHALL BE AS SHOWN.
6. THE LENGTH OF THE ALUMINUM VERTICAL SIGN SUPPORT BEAMS SHALL BE THE SAME AS THE HEIGHT OF THE SIGN THEY ARE SUPPORTING. BEAM LENGTHS MAY BE LONGER FOR PROPER ATTACHMENT TO CHORDS.
7. SEE DETAIL BELOW FOR SPACING OF ALUMINUM VERTICAL SIGN SUPPORTS
8. MATERIAL NOTES:
STAINLESS STEEL U-BOLTS, BOLTS, AND LOCKWASHERS ASTM 304.
STAINLESS STEEL HEX NUTS ASTM A276.
ALUMINUM I-BEAMS ARE 6061-T6.
9. SLOTTED HOLES IN I-BEAMS ARE NOT ALLOWED



TYPICAL SIGN CONNECTION FOR
2-CHORD OR 4-CHORD TRUSS
PLAN VIEW



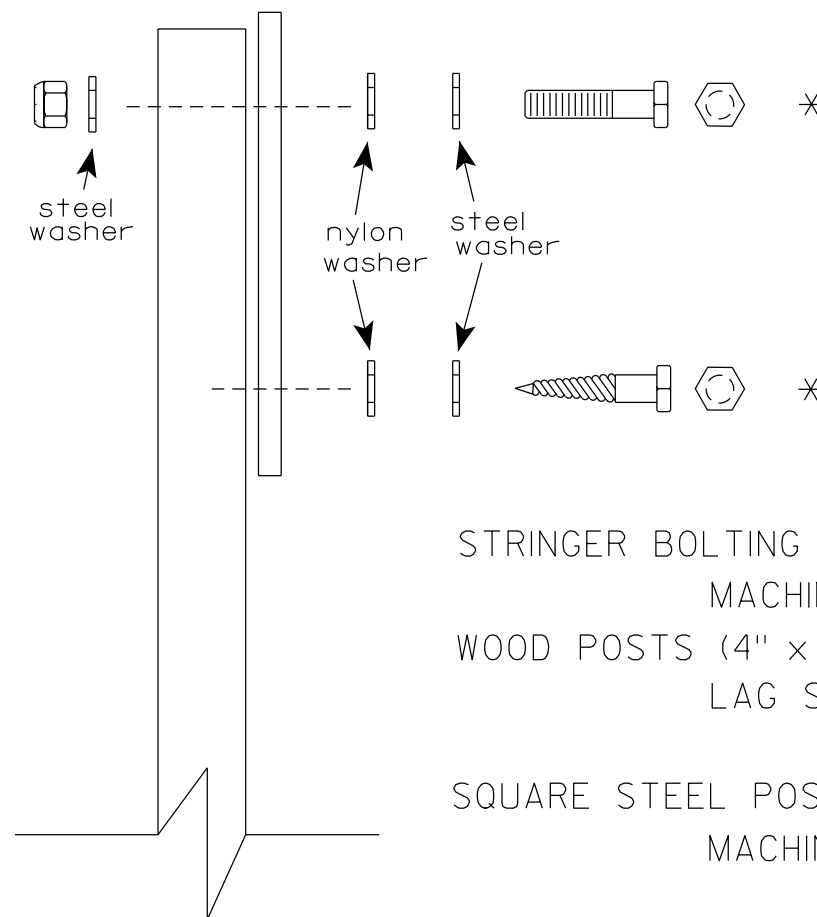
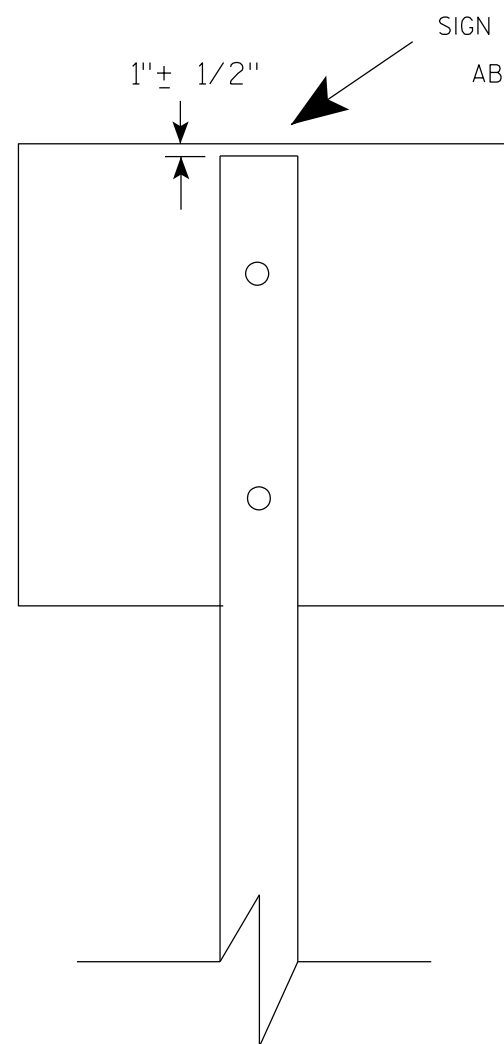
TYPICAL SIGN CONNECTION FOR
MONOTUBE
PLAN VIEW



SPACING OF I5X3.7 ALUMINUM
SINGLE VERTICAL SIGN SUPPORT

TYPE II SIGN CONNECTION
TO OVERHEAD SIGN SUPPORT

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 1/07/20 PLATE NO. A4-7B.1



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

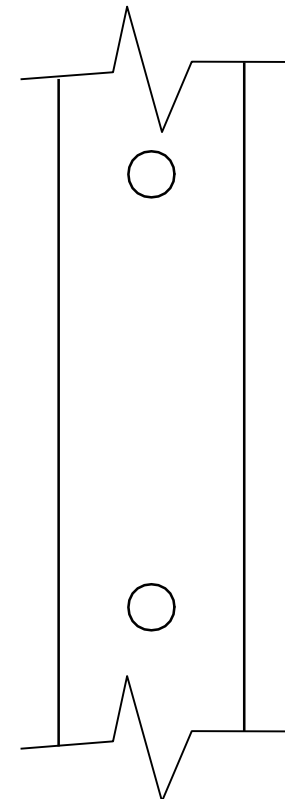
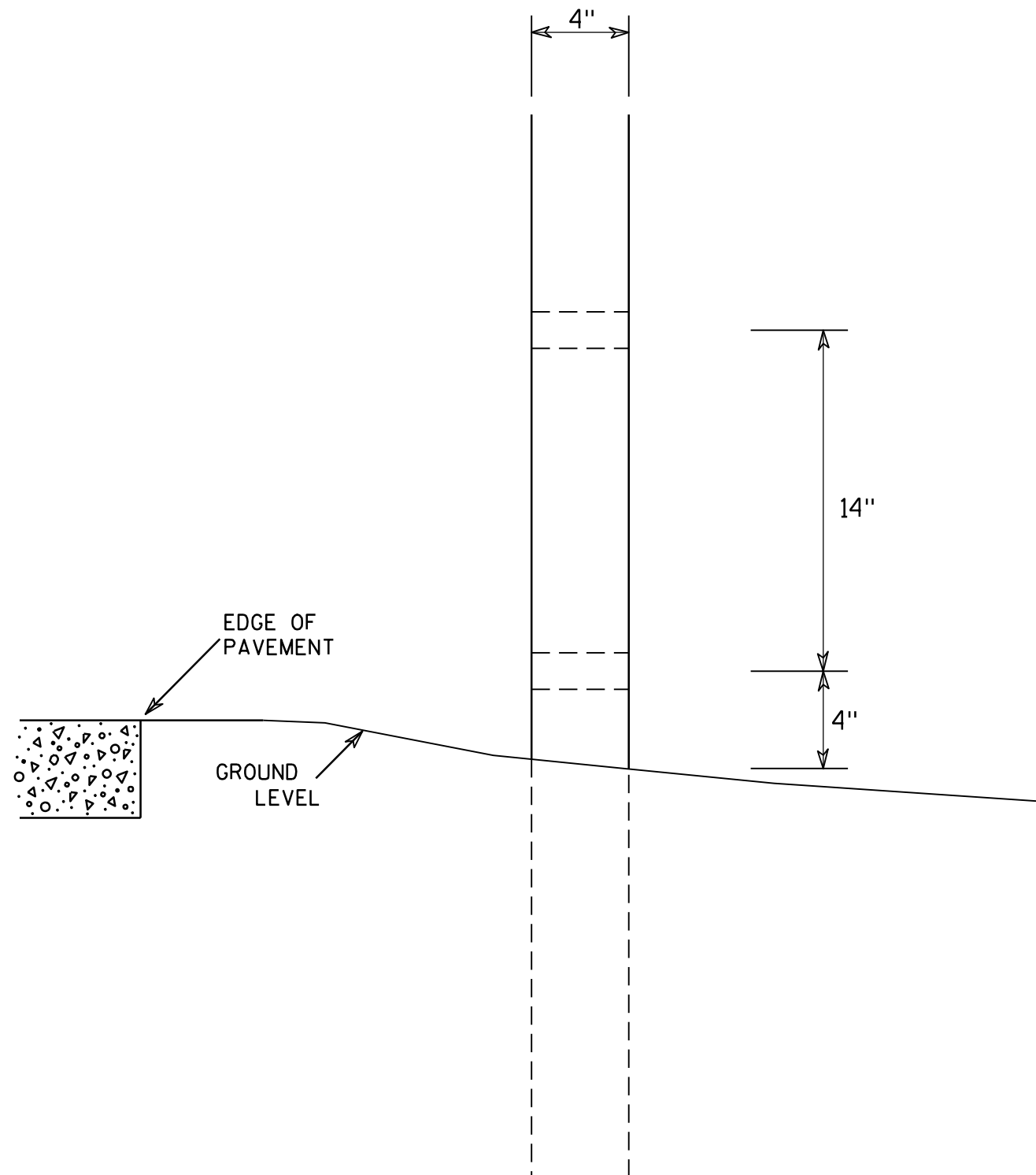
- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

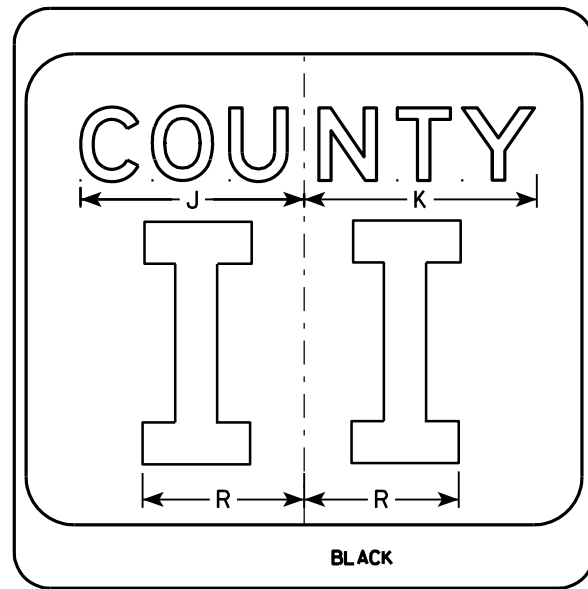
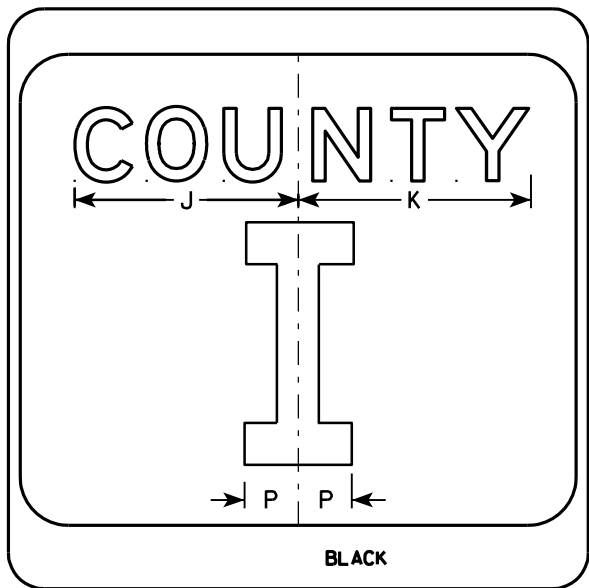
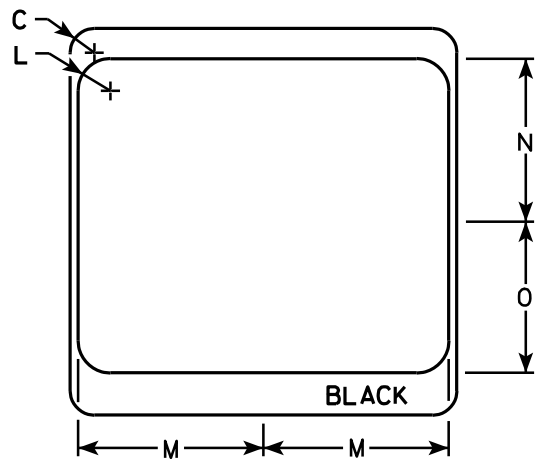
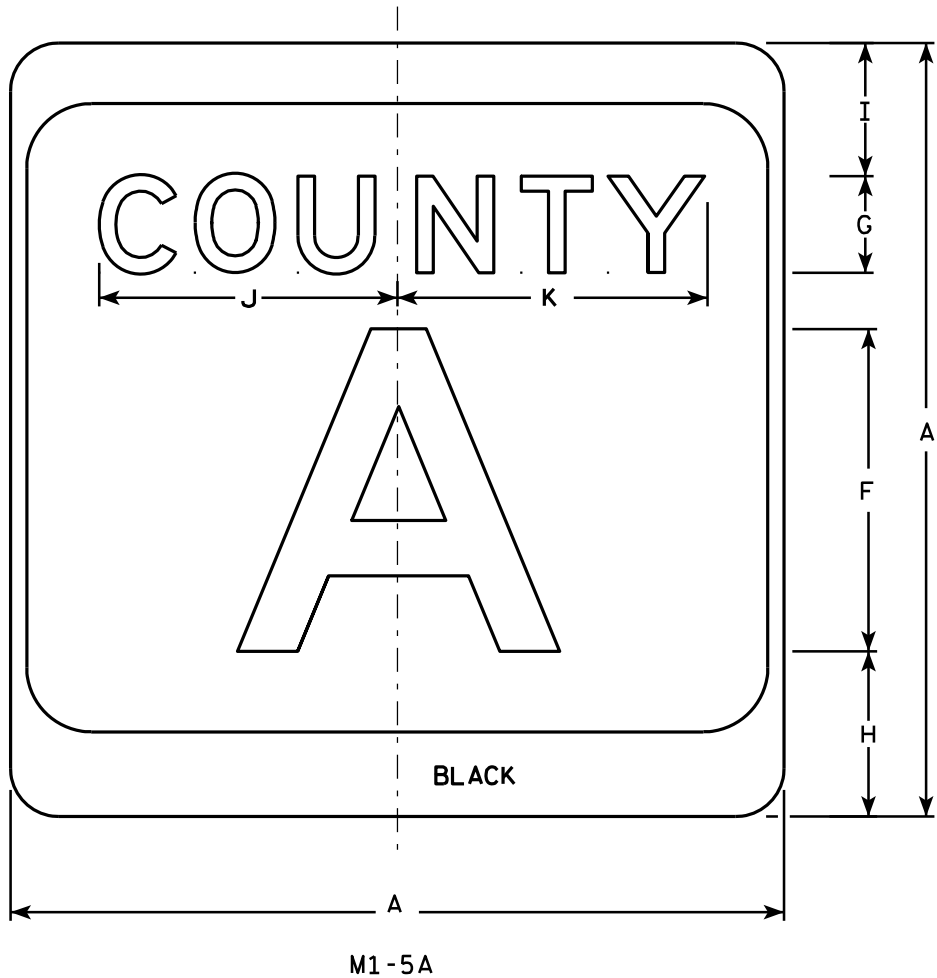
HWY:

COUNTY:

SHEET NO: 129

E

7



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 130	E
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CTH MARKER

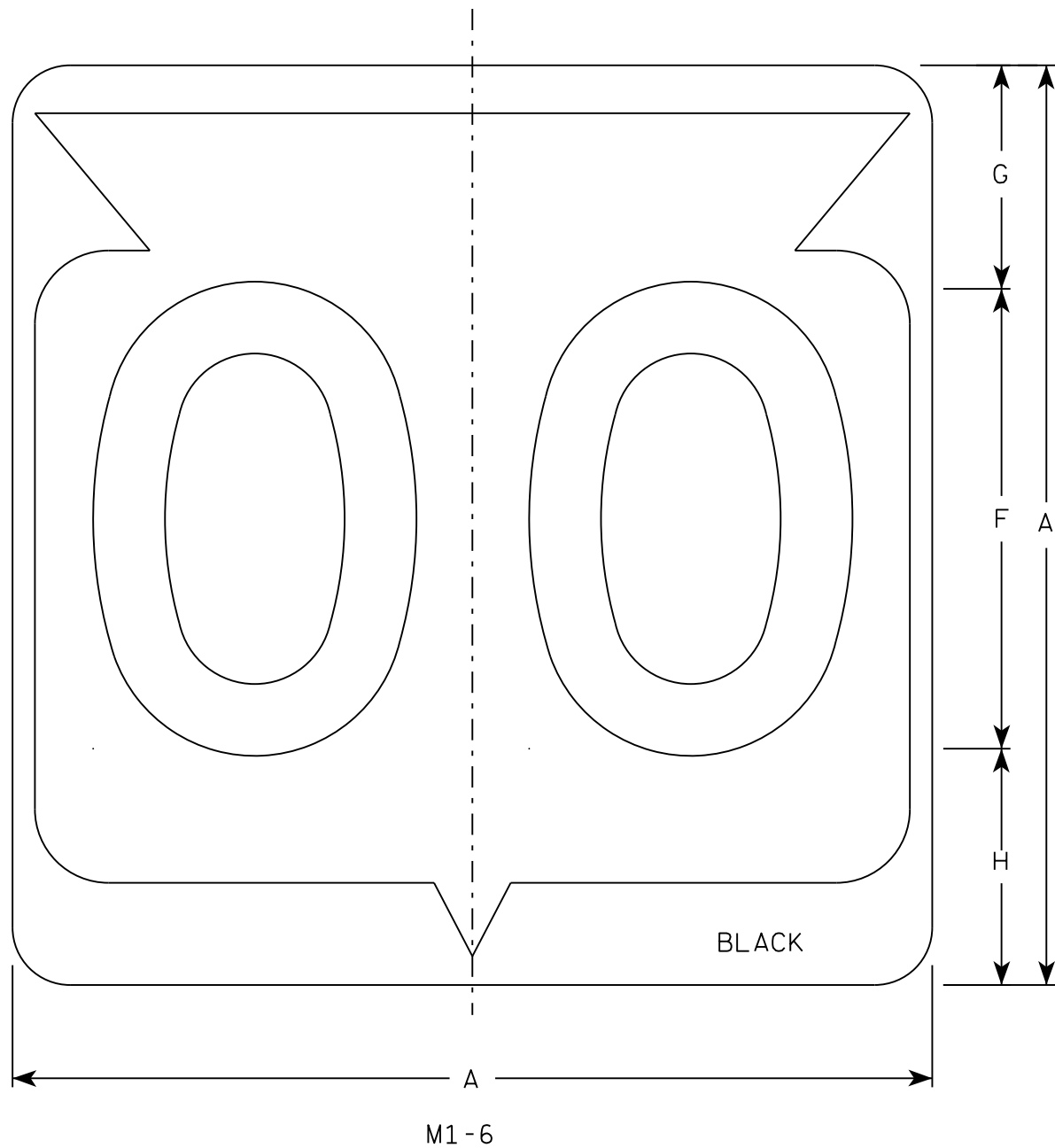
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

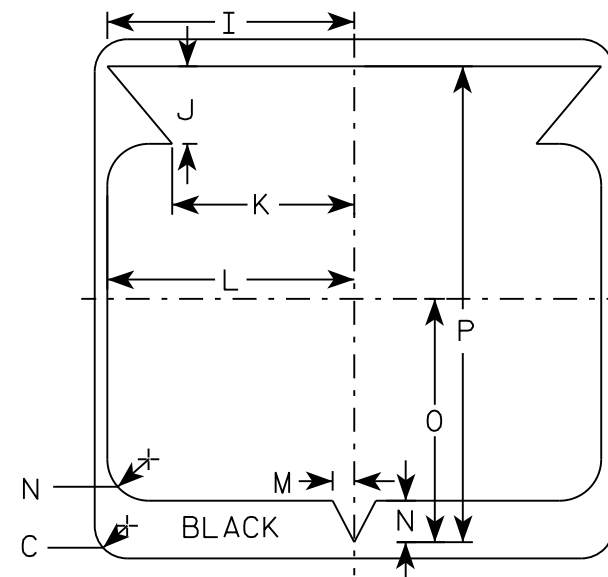
DATE 9/27/11 PLATE NO. M1-5A.8

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

SHEET NO: 131 E

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - Green
Message - White
- 3. Message Series - D for Size 1 except when over 108" than Series C
C for Size 2 except when over 108" use Series B
- 4. Base material shall be 0.125 aluminum
- 5. Width may be no more than 108"

Typical for Overhead Street Name



M1-94H

*Minimum dimension is 6 inch for Size 2 and 4 inch for Size 1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	Varies	18	3			6	8	5 5⁄8	4	3	6 5⁄8																Varies
2	Varies	18	3			9	12	4	6	4 1⁄2	5 1⁄2																Varies
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 132

E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - Green

Message - White
3. Message Series - D for Size 1 except when over 108" use Series C
C for Size 2 except when over 108" use Series B
4. Base material shall be 0.125 aluminum
5. Width may be no more than 108"

Typical for Overhead Street Name with Shield



M1-94S

* Minimum dimension is 6 inches for Size 2 and 4 inches for Size 1.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	Varies	18	3			6	8	5 5/8	4	3	6 5/8																Varies
2	Varies	18	3			9	12	4	6	4 1/2	5 1/2																Varies
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 133

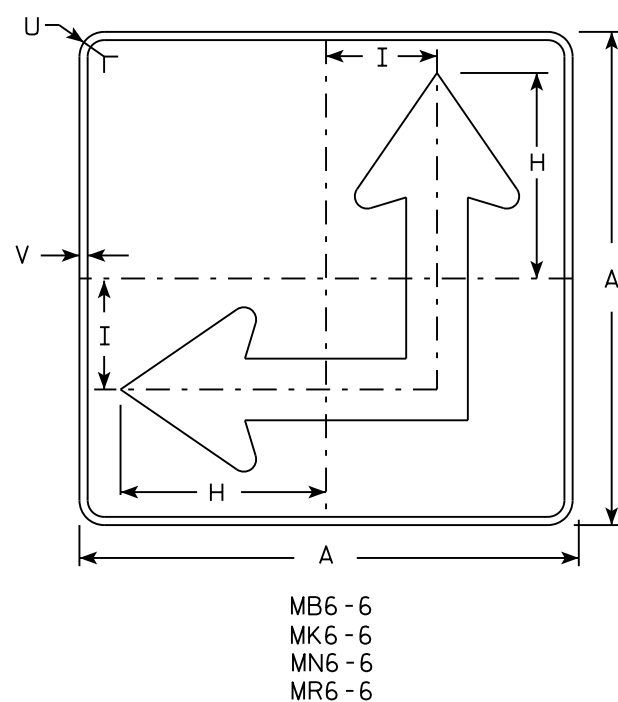
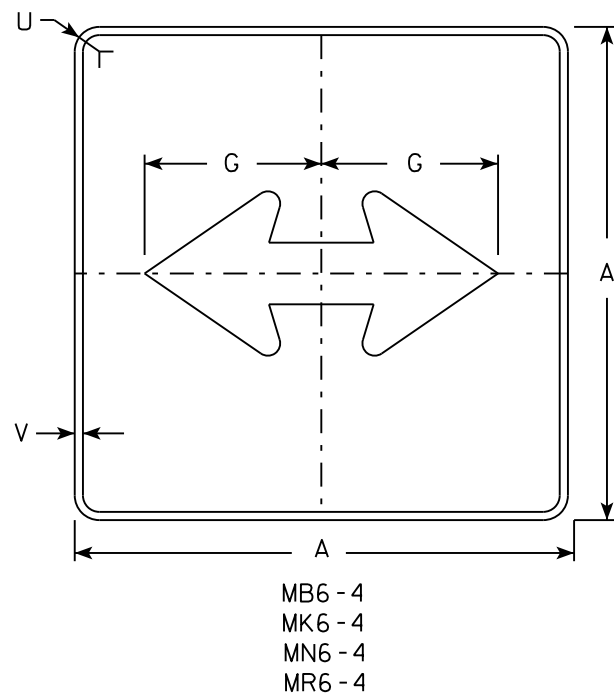
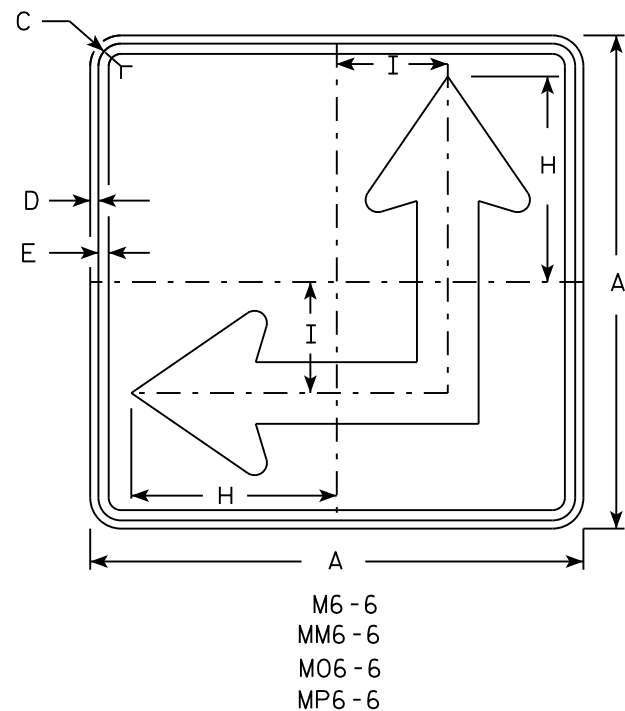
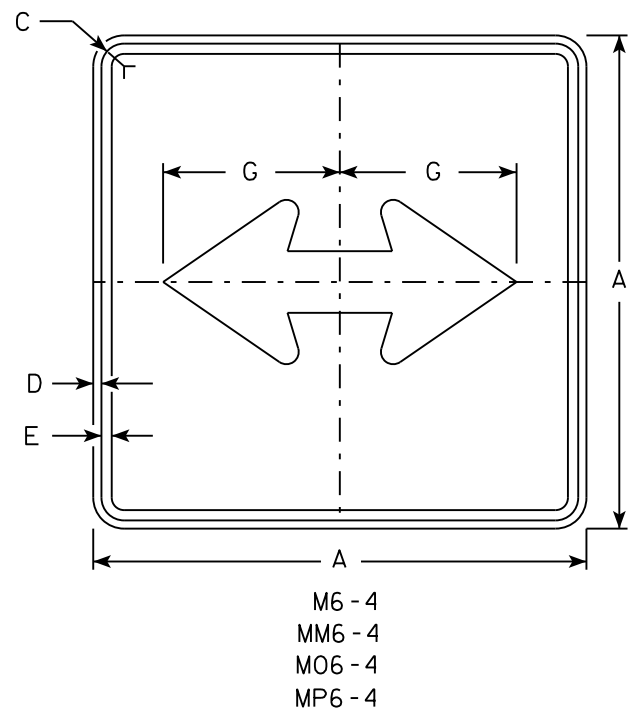
E

STANDARD SIGN
M1-94S

WISCONSIN DEPT OF TRANSPORTATION

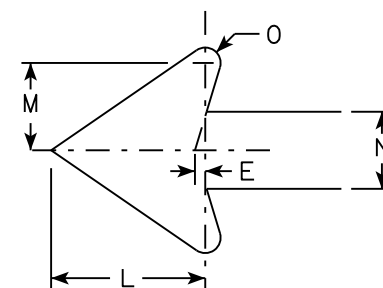
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/2/19 PLATE NO. M1-94S.5



NOTES

1. Signs are Type II - Type H except as Shown
2. Color:
Background - See Note 4
Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



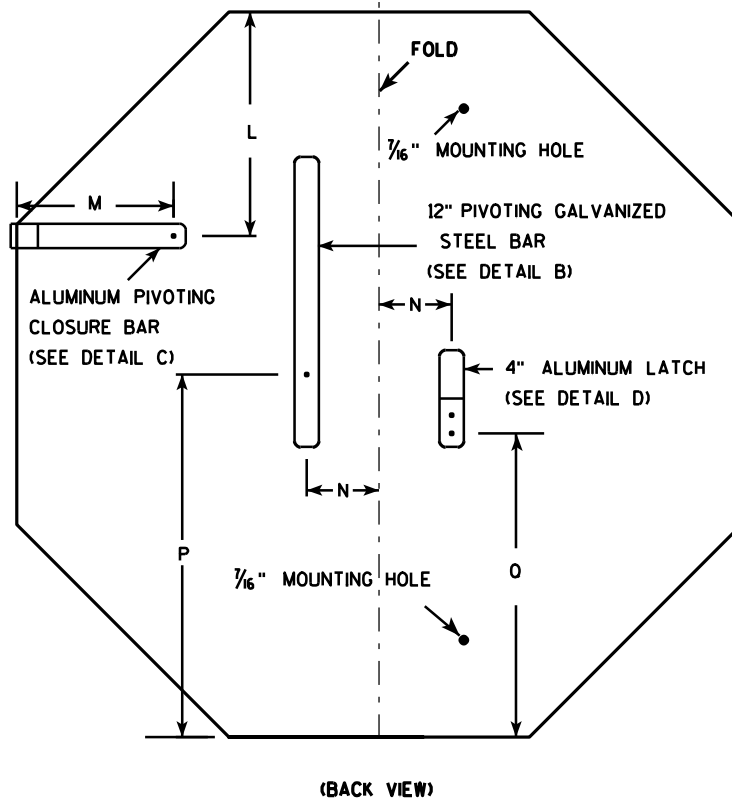
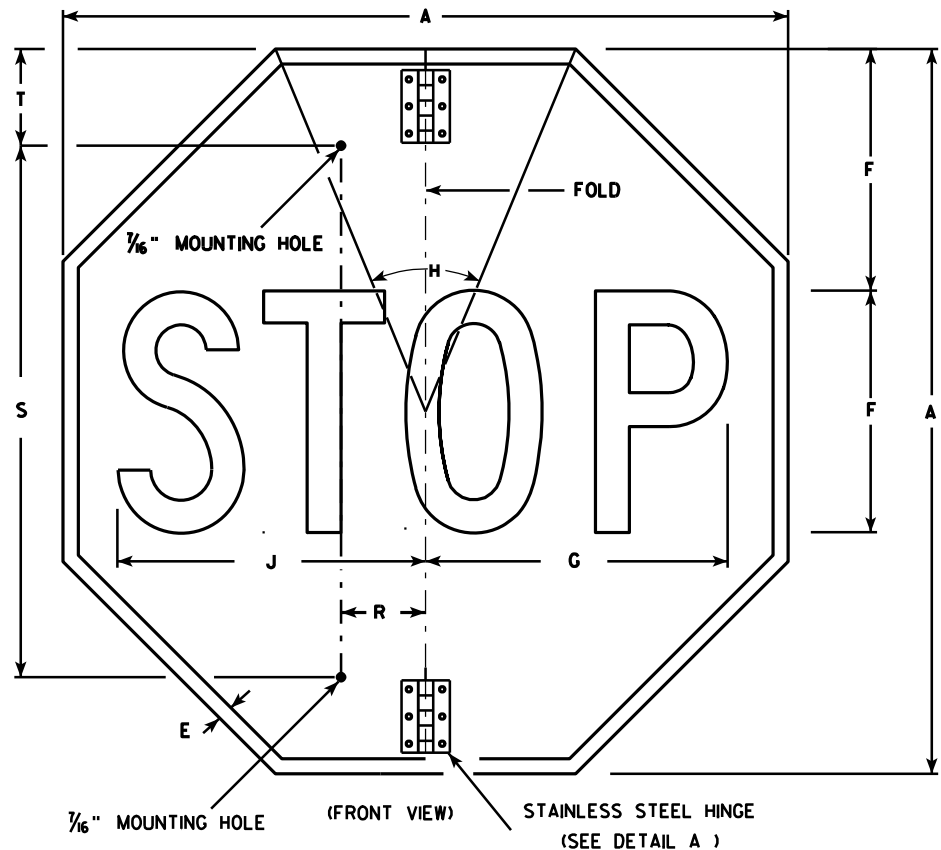
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

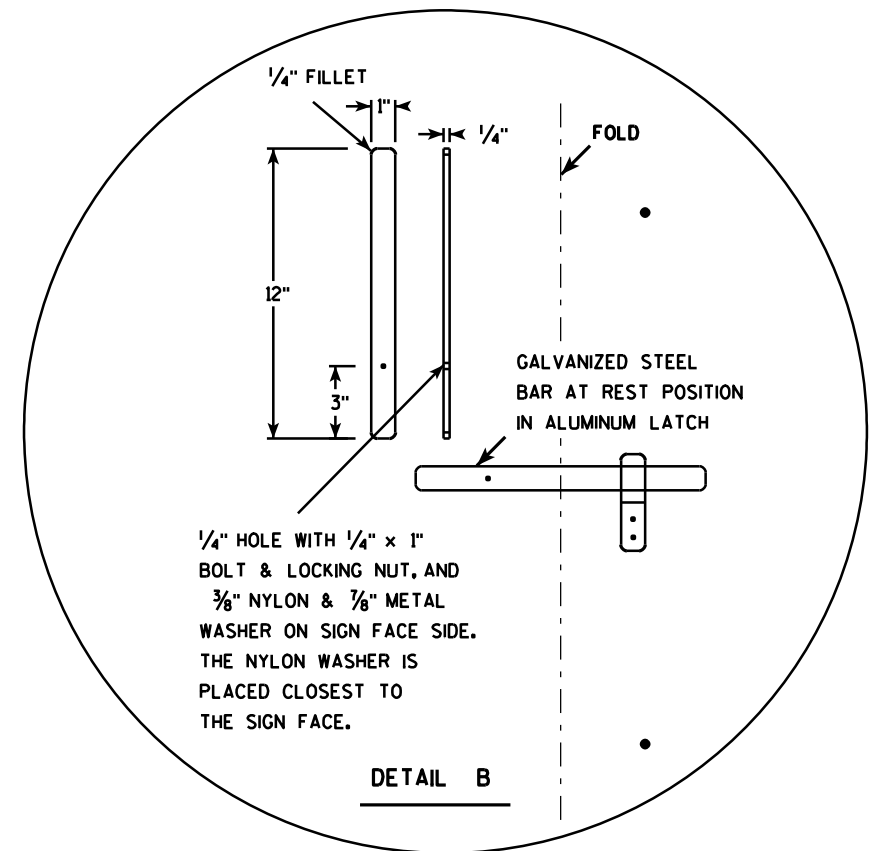
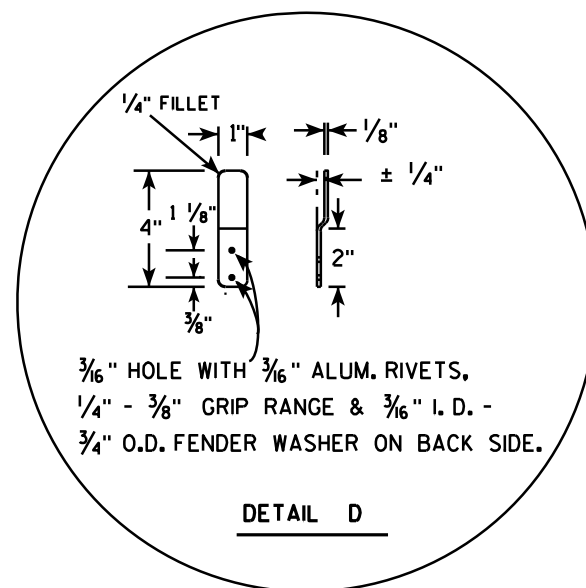
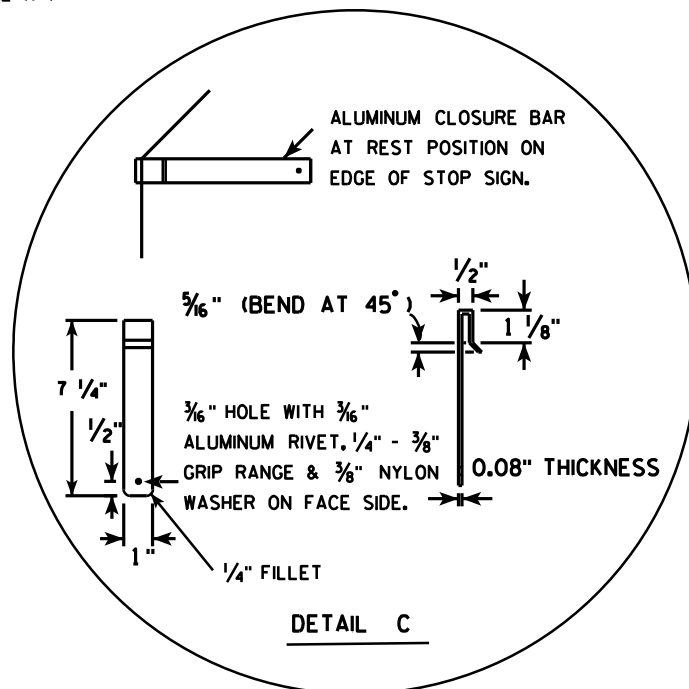
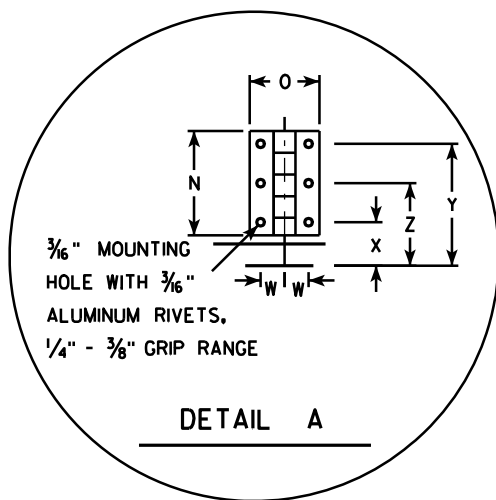
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10



NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Red
Message - White
- Message Series - C
- All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				$\frac{5}{8}$	10	12 $\frac{1}{2}$	45		12 $\frac{3}{4}$		9 $\frac{1}{4}$	6 $\frac{1}{2}$	3	2	15	12 $\frac{3}{8}$	2 $\frac{1}{2}$	22	5			$\frac{1}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	5.18
2M	36				$\frac{3}{4}$	12	15	45		15 $\frac{3}{8}$		11	6 $\frac{1}{2}$	3	2	18	15 $\frac{3}{8}$	2 $\frac{1}{2}$	26	5			$\frac{1}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	7.46
3	36				$\frac{3}{4}$	12	15	45		15 $\frac{3}{8}$		11	6 $\frac{1}{2}$	3	2	18	15 $\frac{3}{8}$	2 $\frac{1}{2}$	26	5			$\frac{1}{16}$	1 $\frac{1}{4}$	3 $\frac{1}{2}$	2 $\frac{3}{8}$	7.46
4																											
5																											

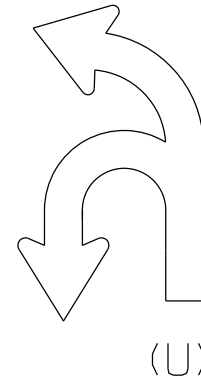
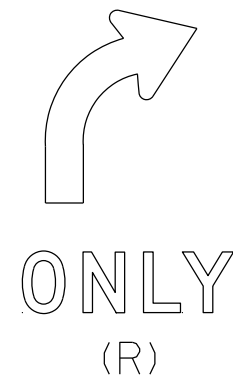
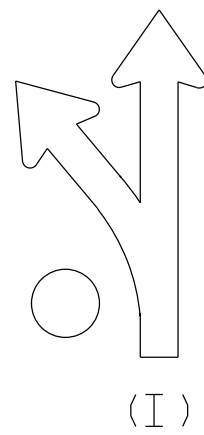
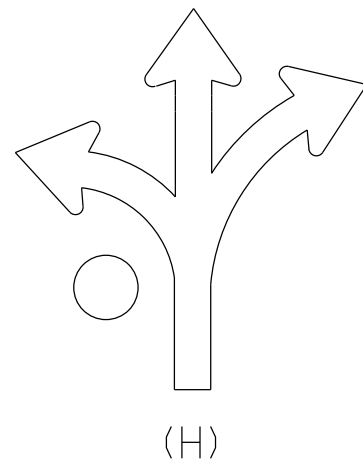
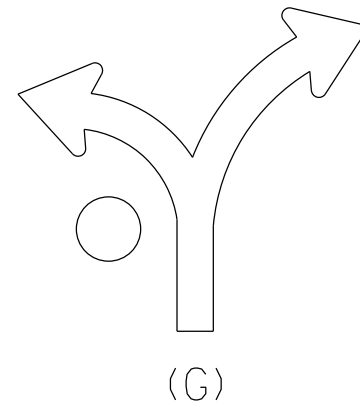
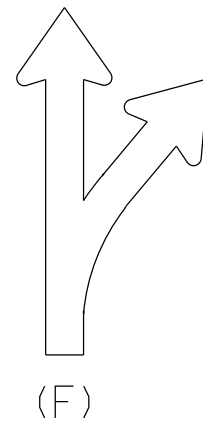
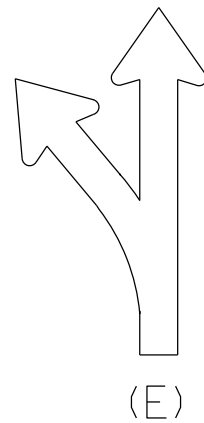
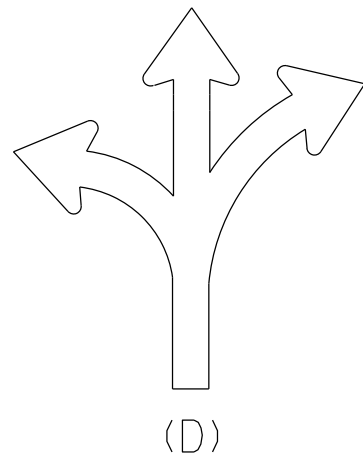
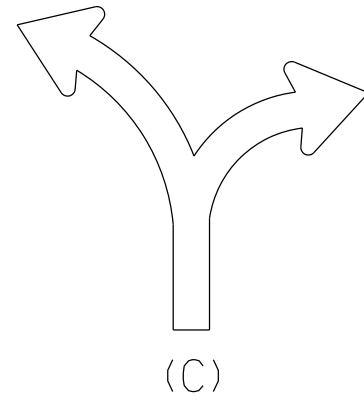
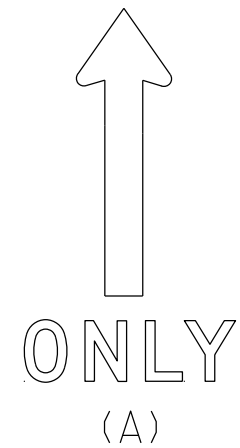
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 135	E
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STANDARD SIGN R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3



NOTES

1. Sigs are Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Use appropriate Letter for Sign Code
Each letter added makes sign wider. Example R3-8EAR
5. Square footage of sign varies by letters

1 Letter = 3.75 sq ft for Size 2

6.0 sq ft for Size 3

10.0 sq ft for Size 4 or 5

2 Letters = 7.5 sq ft for Size 2

12.0 sq ft for Size 3

20.0 sq ft for Size 4 or 5

3 Letters = 11.25 sq ft for Size 2

18.0 sq ft for Size 3

30.0 sq ft for Size 4 or 5

4 Letters = 15.0 sq ft for Size 2

24.0 sq ft for Size 3

40.0 sq ft for Size 4 or 5

5 Letters = 18.75 sq ft for Size 2

30.0 sq ft for Size 3

50.0 sq ft for Size 4 or 5

6 Letters = 22.5 sq ft for Size 2

36.0 sq ft for Size 3

60.0 sq ft for Size 4 or 5

6. When letters C,D,G,H are used on the Left or Right end of the sign the Sq.Ft. changes.

Add the amounts when these letters are used:

1.25 sq ft for Size 2

1.5 sq ft for Size 3

2.0 sq ft for Size 4 or 5

STANDARD SIGN
R3-8 Series

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

PROJECT NO:

FILE NAME : C:\CAEfiles\Projects\stdplate_R38.dgn

PLOT DATE : 21-MAY 2019 4:37

PLOT BY : mscj9h

PLOT NAME :

SHEET NO: 136

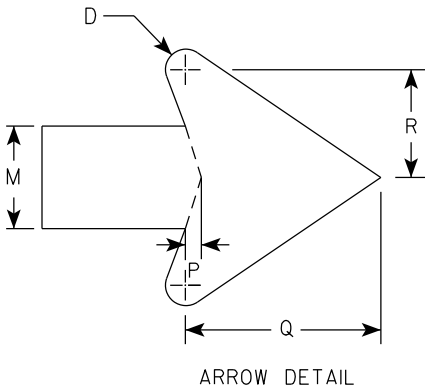
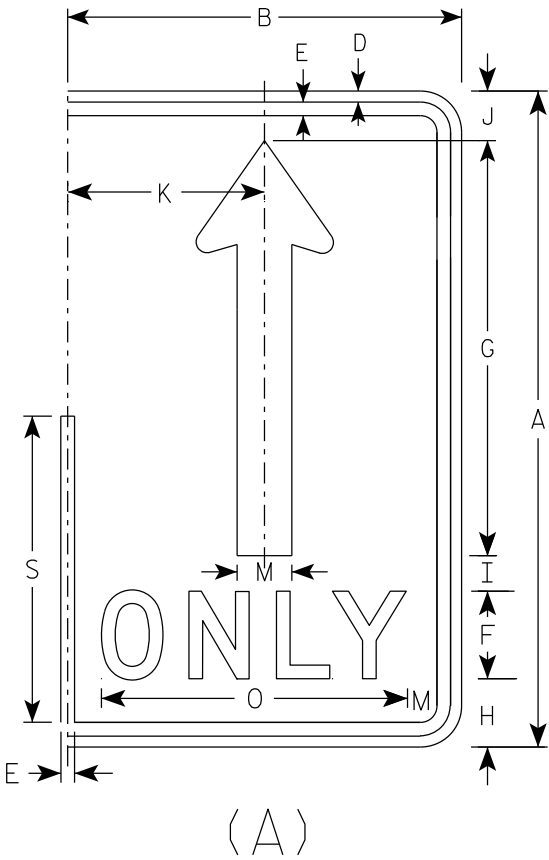
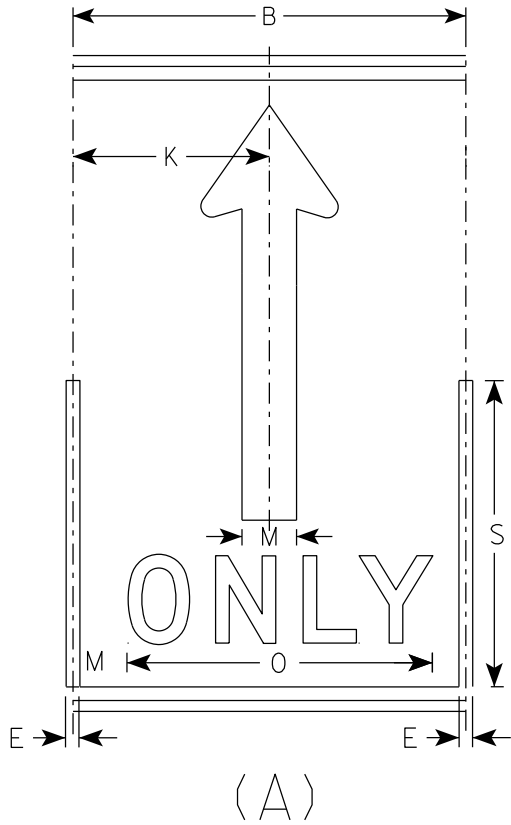
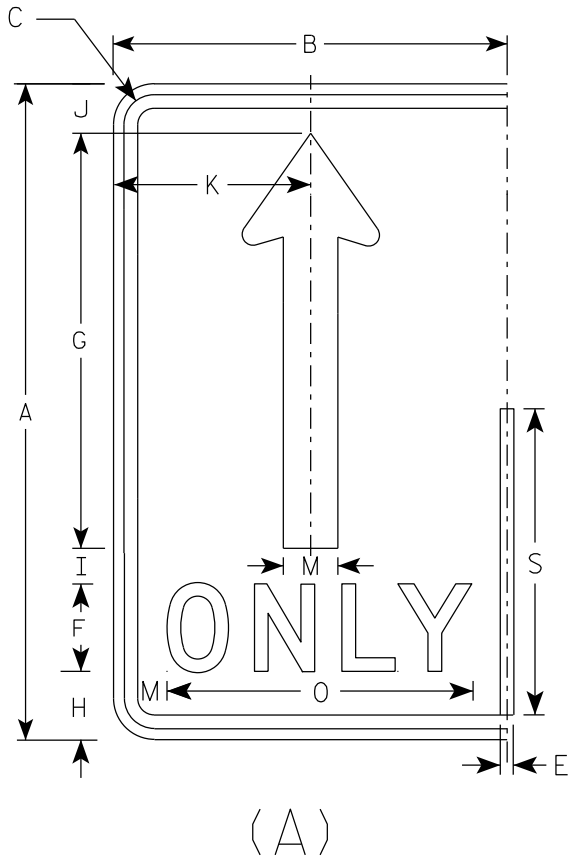
E

WISDOT/CADDs SHEET 42

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	19	3 1⁄8	1 5⁄8	2 1⁄4	9		2 1⁄2		14	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	19	3 1⁄8	1 5⁄8	2 1⁄4	9		2 1⁄2		14	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	22 3⁄4	3 3⁄4	1 3⁄4	2 3⁄4	12		3		17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1	6	30 3⁄8	5 1⁄8	2 7⁄8	3 5⁄8	15		4		21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1	6	30 3⁄8	5 1⁄8	2 7⁄8	3 5⁄8	15		4		21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

STANDARD SIGN
R3-8 (A) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

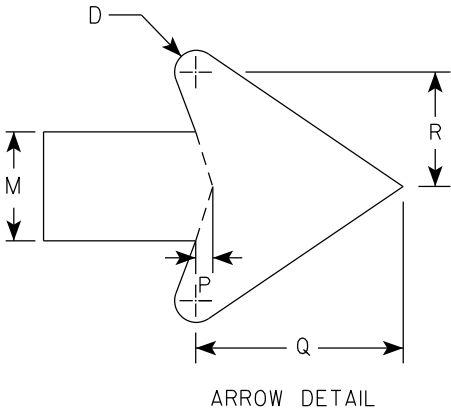
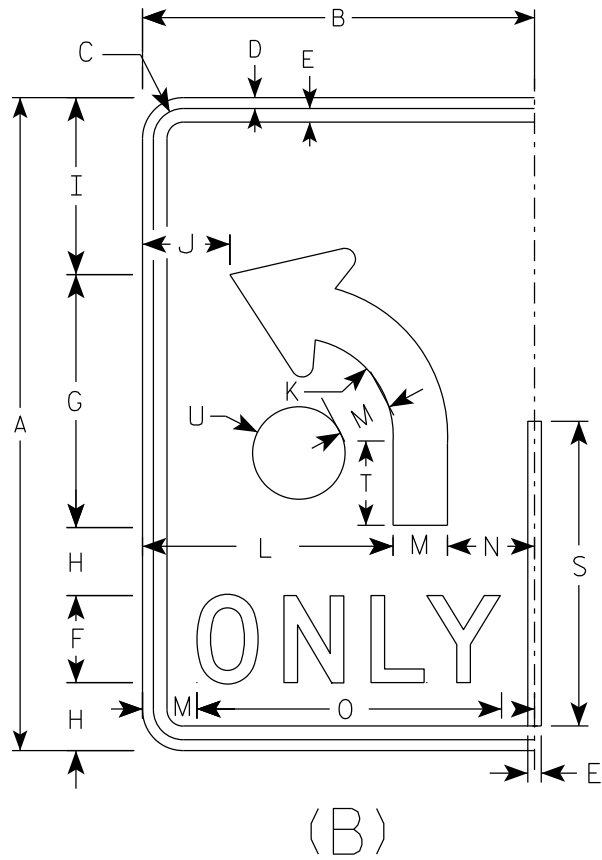
NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black

Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8	2 1⁄8						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8	2 1⁄8						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4	6	5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8	2 1⁄2						6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4	3 3⁄8						10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4	3 3⁄8						10.0

STANDARD SIGN

R3-8 (B) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

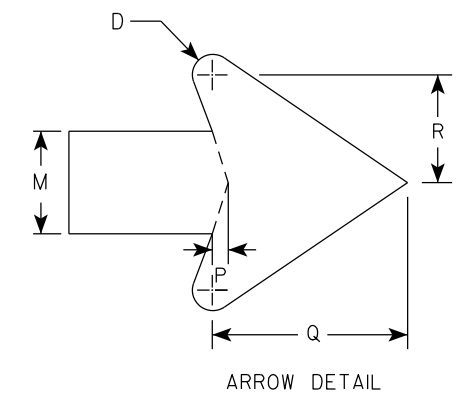
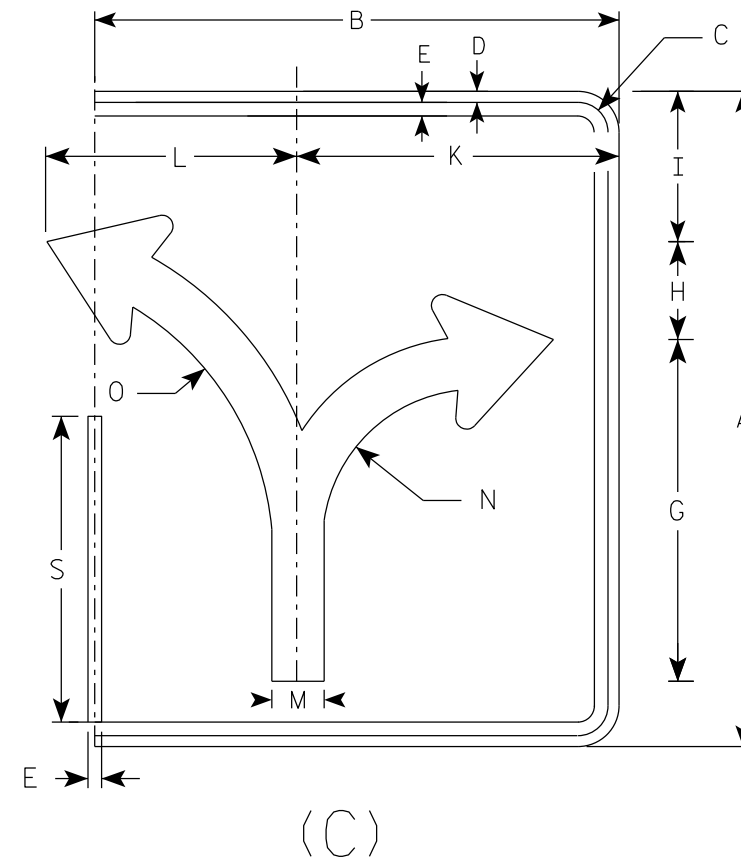
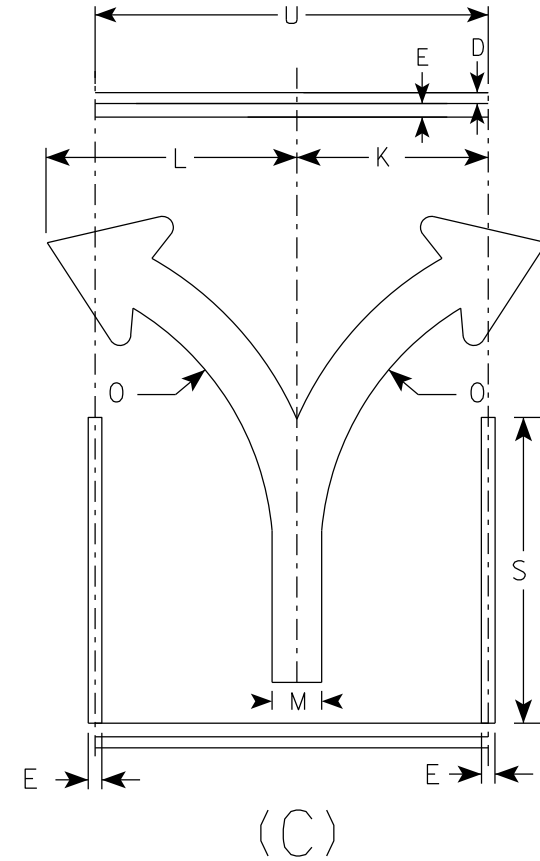
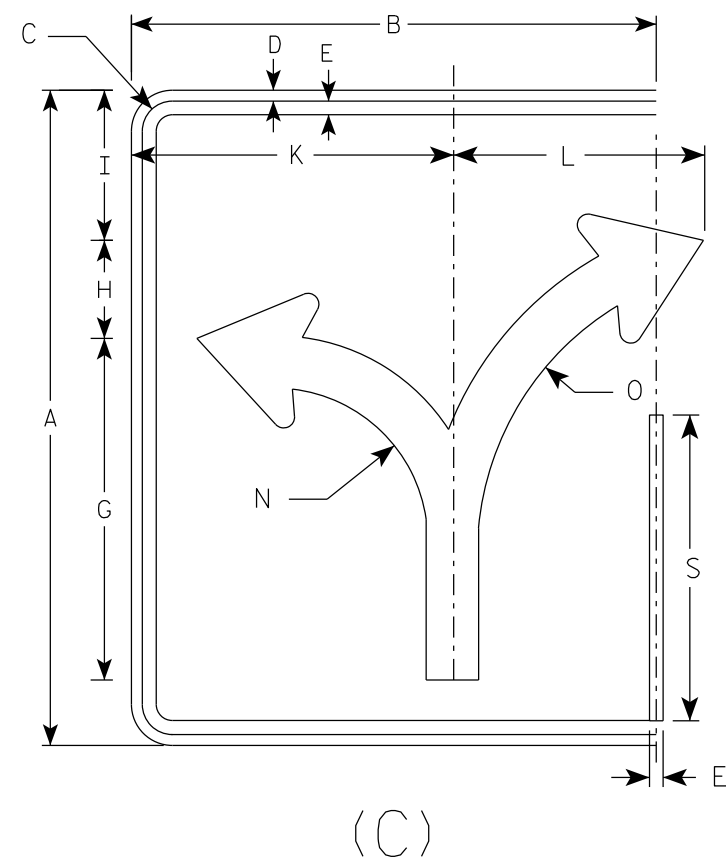
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - None



7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	ENDS	MIDDLE
																											Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
2M	30	24	1 3/8	1/2	5/8		15 5/8	4 1/2	6 7/8		14 3/4	11 1/2	2 3/8	7	13 1/4	3/8	4 1/2	2 1/2	14		18						5.0	3.75
3	36	30	1 3/8	1/2	5/8		18 3/4	5 1/2	8 1/4		17 1/4	17 1/4	2 7/8	8 3/8	16	1/2	5 1/2	3	16 3/4		24						7.5	6.0
4	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0
5	48	36	2 1/4	3/4	1		24 7/8	7 1/4	11		23 1/8	18	3 3/4	11 1/8	21 1/4	5/8	7 1/8	4	22 3/8		30						12.0	10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 139

E

STANDARD SIGN
R3-8 (C) Arrow

WISCONSIN DEPT OF TRANSPORTATION

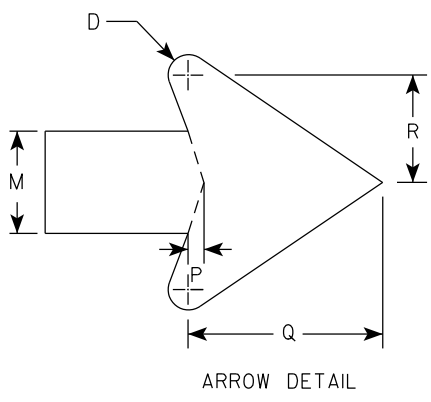
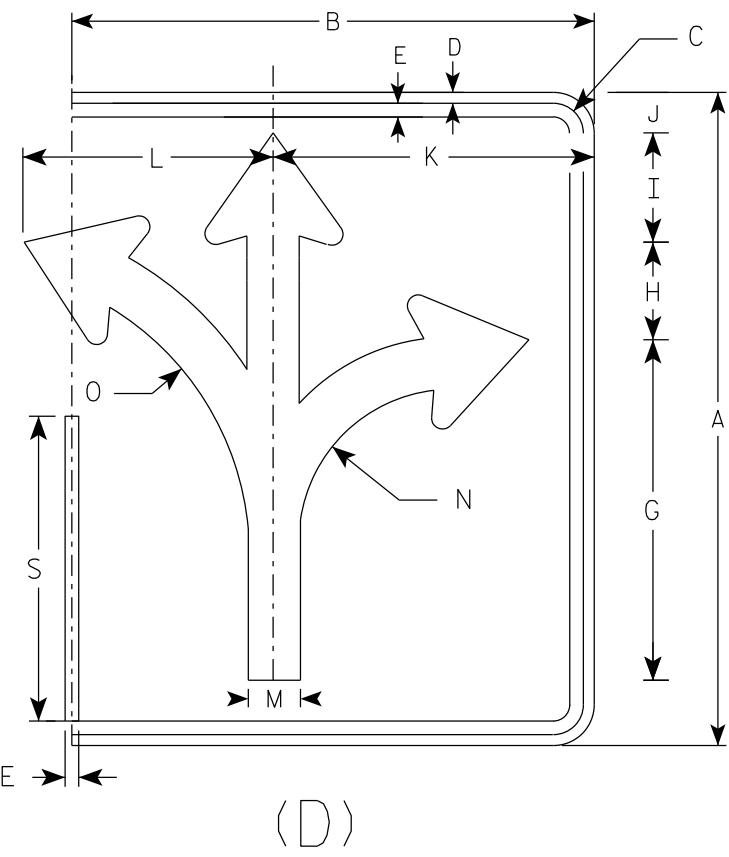
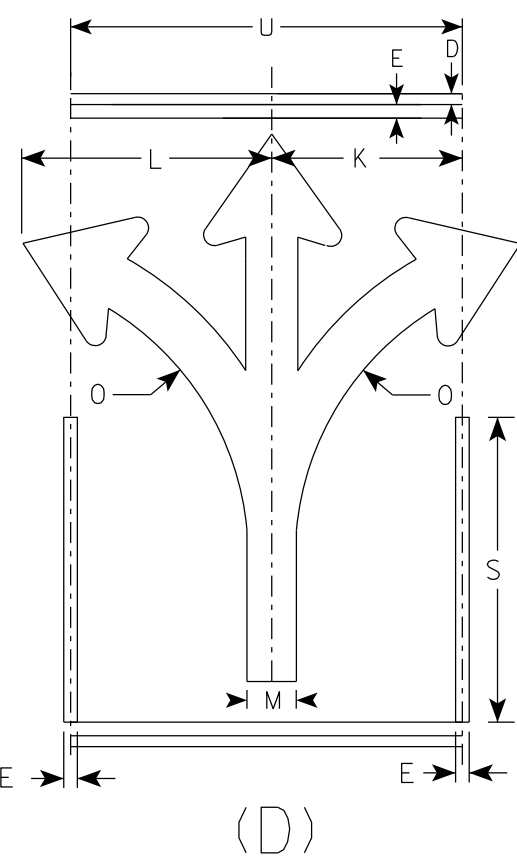
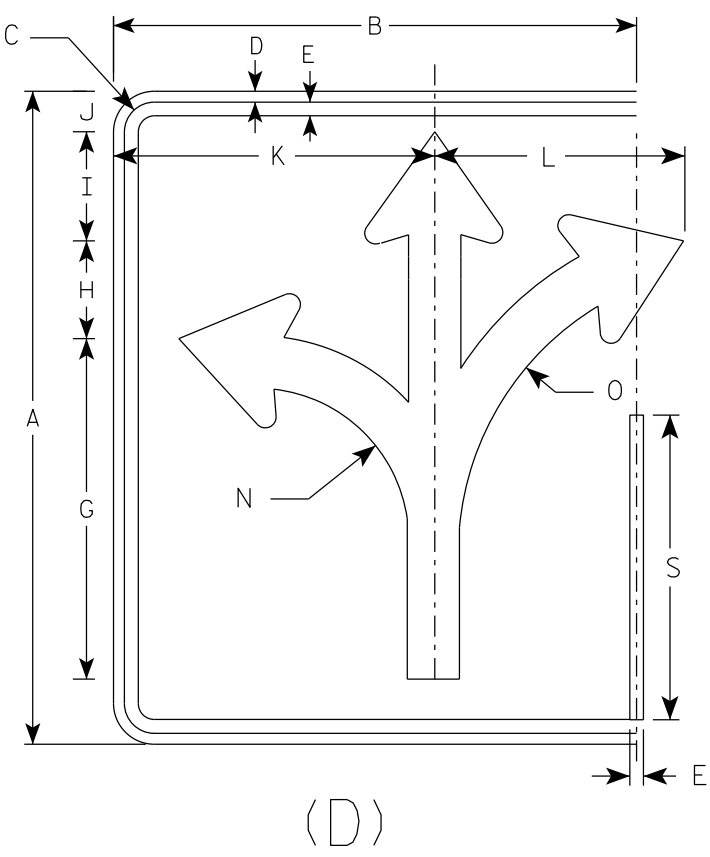
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



7

																											ENDS	MIDDLE
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. ft.
1																												
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		18						5.0	3.75
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	2 1⁄4	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		24						7.5	6.0
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		30						12.0	10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 140

E

STANDARD SIGN
R3-8 (D) Arrow

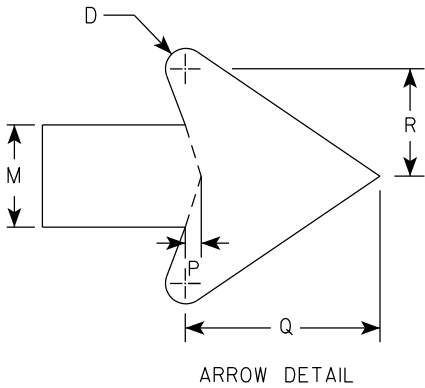
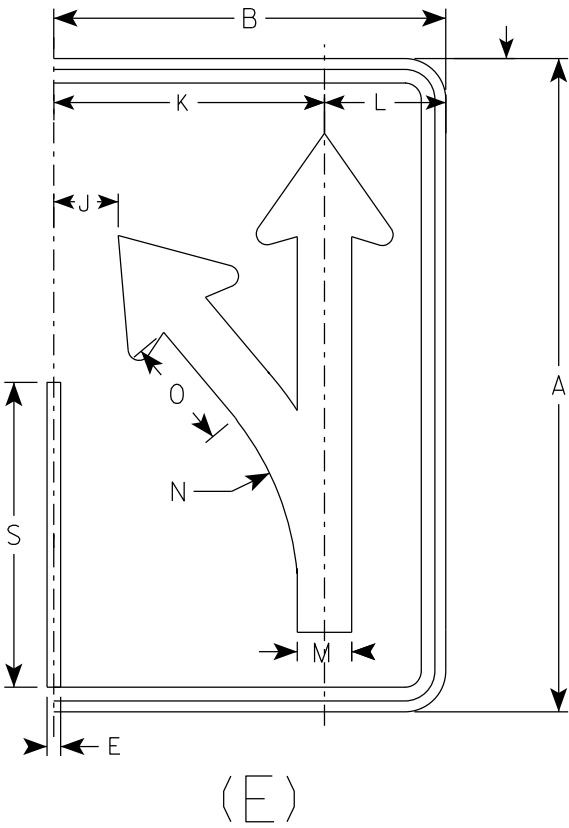
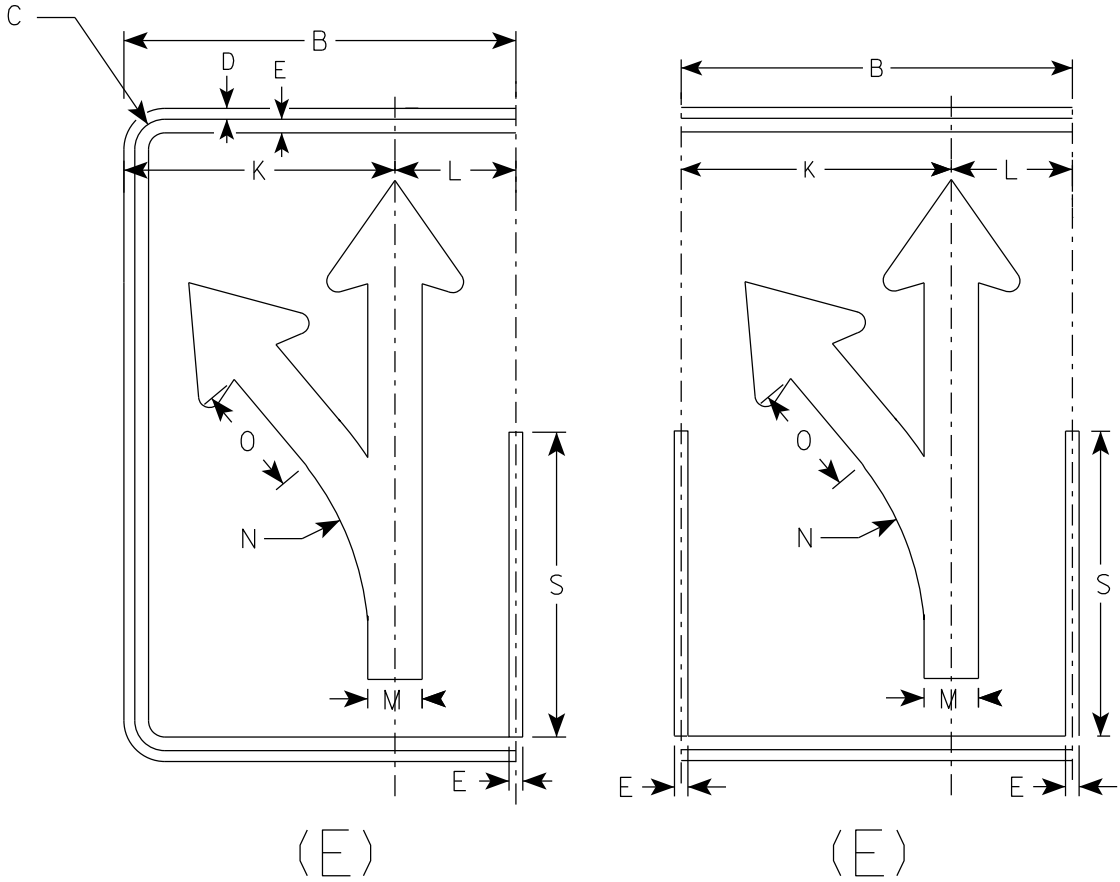
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

STANDARD SIGN
R3-8 (E) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

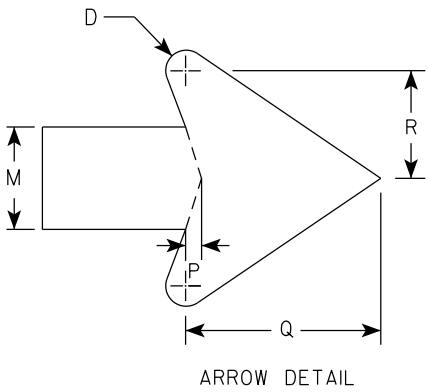
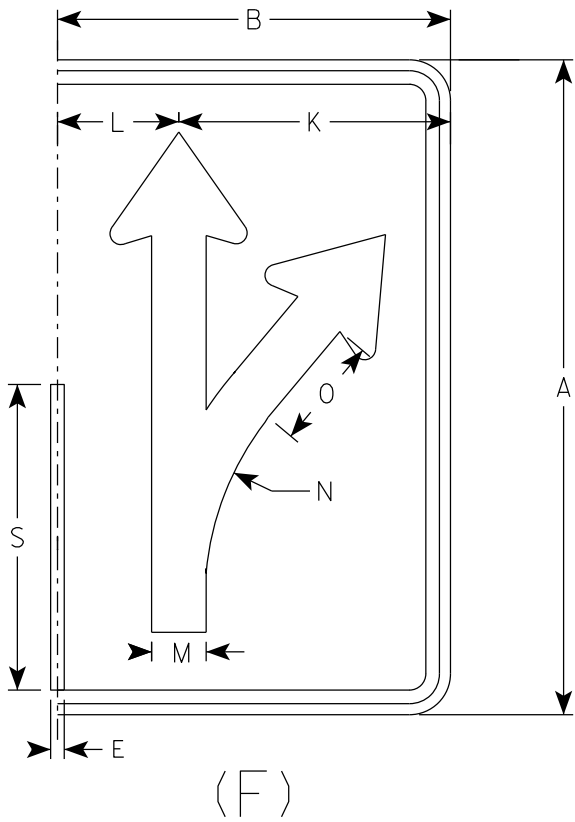
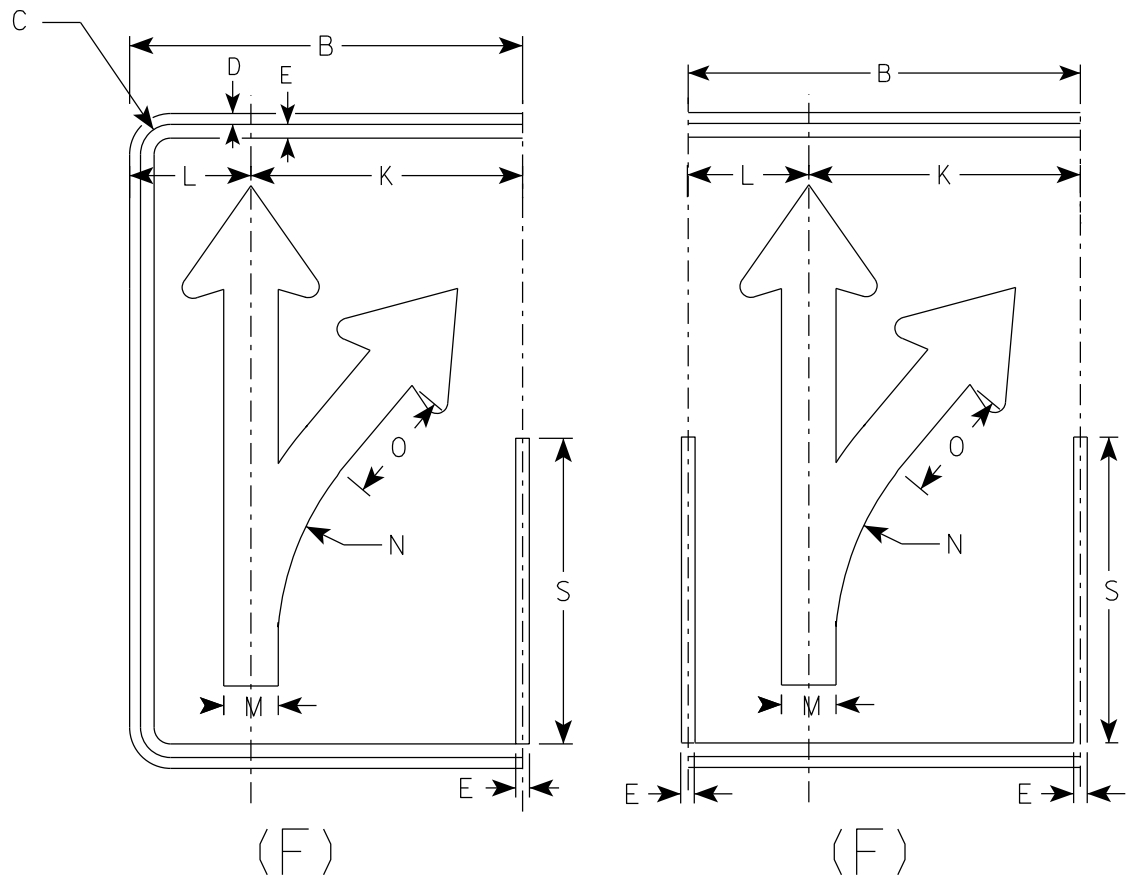
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14								3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4								6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8								10.0

PROJECT NO:

HWY:

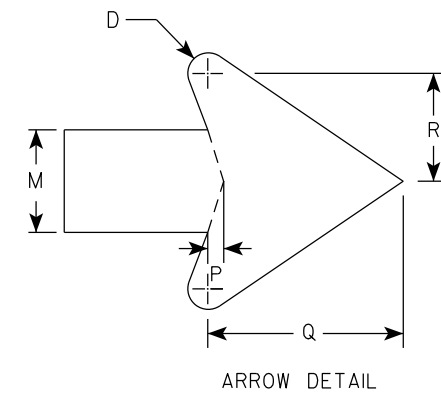
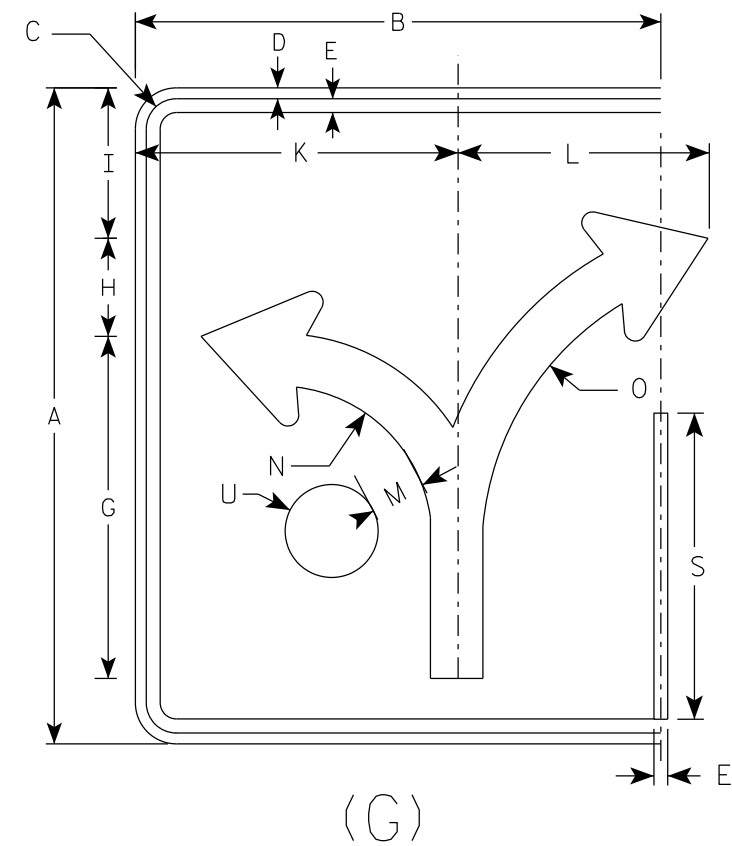
COUNTY:

SHEET NO: 142

E

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	6 7⁄8		14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	8 1⁄4		17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		2 1⁄2						7.5
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	11		23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0

PROJECT NO:		HWY:		COUNTY:		SHEET NO: 143		E
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STANDARD SIGN
R3-8 (G) Arrow

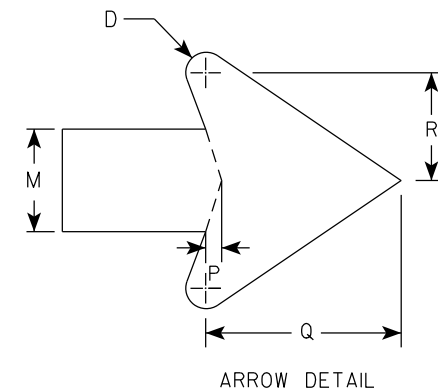
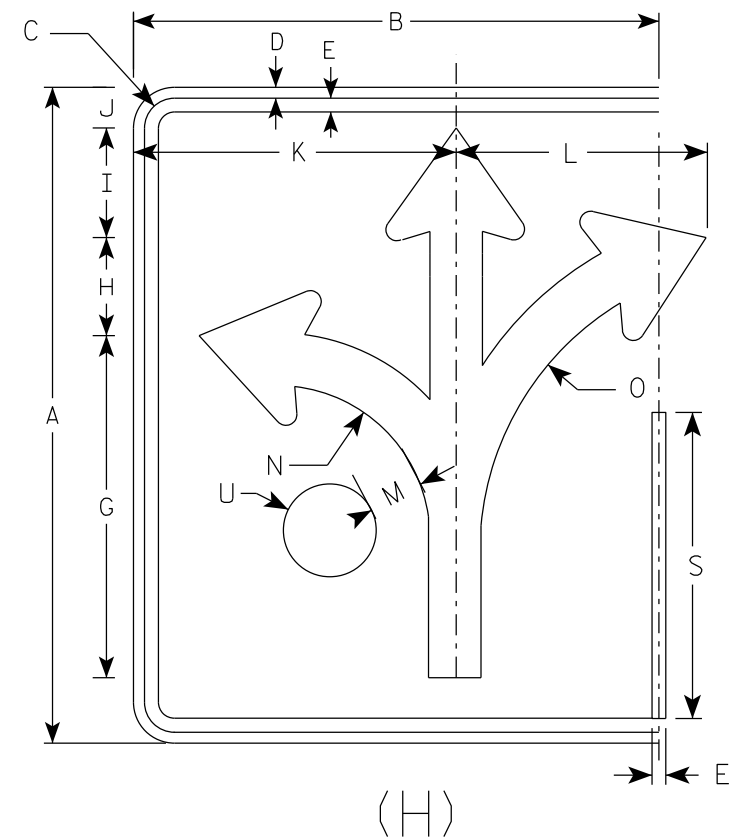
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
2M	30	24	1 3⁄8	1⁄2	5⁄8		15 5⁄8	4 1⁄2	5	1 7⁄8	14 3⁄4	11 1⁄2	2 3⁄8	7	13 1⁄4	3⁄8	4 1⁄2	2 1⁄2	14		2 1⁄8						5.0
3	36	30	1 3⁄8	1⁄2	5⁄8		18 3⁄4	5 1⁄2	6	3 1⁄8	17 1⁄4	17 1⁄4	2 7⁄8	8 3⁄8	16	1⁄2	5 1⁄2	3	16 3⁄4		2 1⁄2						7.5
4	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0
5	48	36	2 1⁄4	3⁄4	1		24 7⁄8	7 1⁄4	7 7⁄8	3 1⁄8	23 1⁄8	18	3 3⁄4	11 1⁄8	21 1⁄4	5⁄8	7 1⁄8	4	22 3⁄8		3 3⁄8						12.0

STANDARD SIGN
R3-8 (H) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

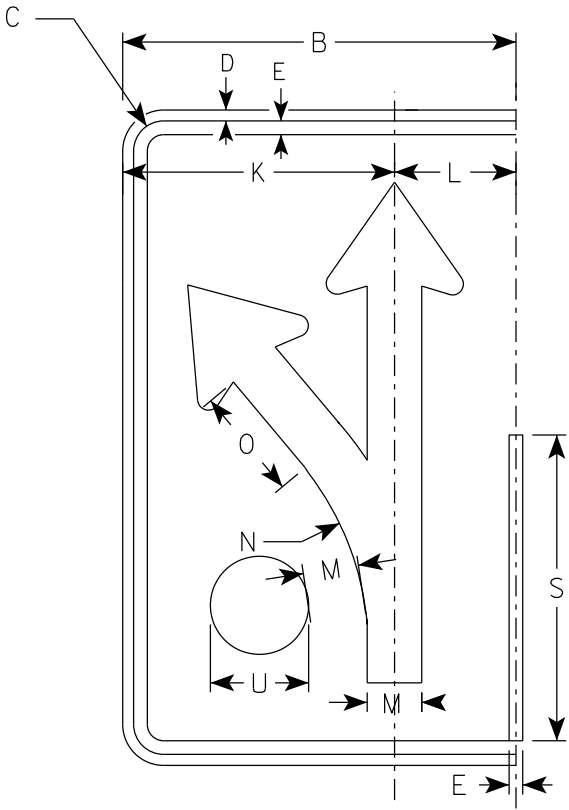
DATE 5/21/19 PLATE NO. R3-8.1

NOTES

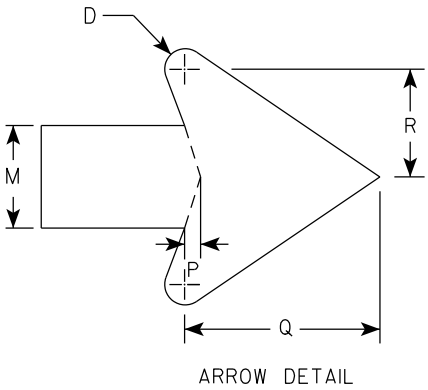
1. Sign is Type II - Type H Reflective
2. Color:

Background - White

Message - Black
3. Message Series - None



(I)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14		2 1⁄8						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		18 1⁄4	4 3⁄4	3 1⁄4	3	12 1⁄2	5 1⁄2	2 1⁄2	13 1⁄4	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14		2 1⁄8						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	5 5⁄8	4	4 7⁄8	16 1⁄8	7 3⁄4	3	15 7⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4		2 1⁄2						6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8		3 3⁄8						10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	7 1⁄2	5 1⁄4	5 3⁄8	20 1⁄2	9 1⁄2	4	21 1⁄4	8 1⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8		3 3⁄8						10.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 145

E

STANDARD SIGN

R3-8 (I) Arrow

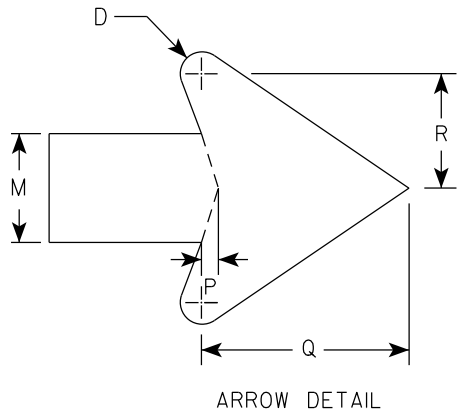
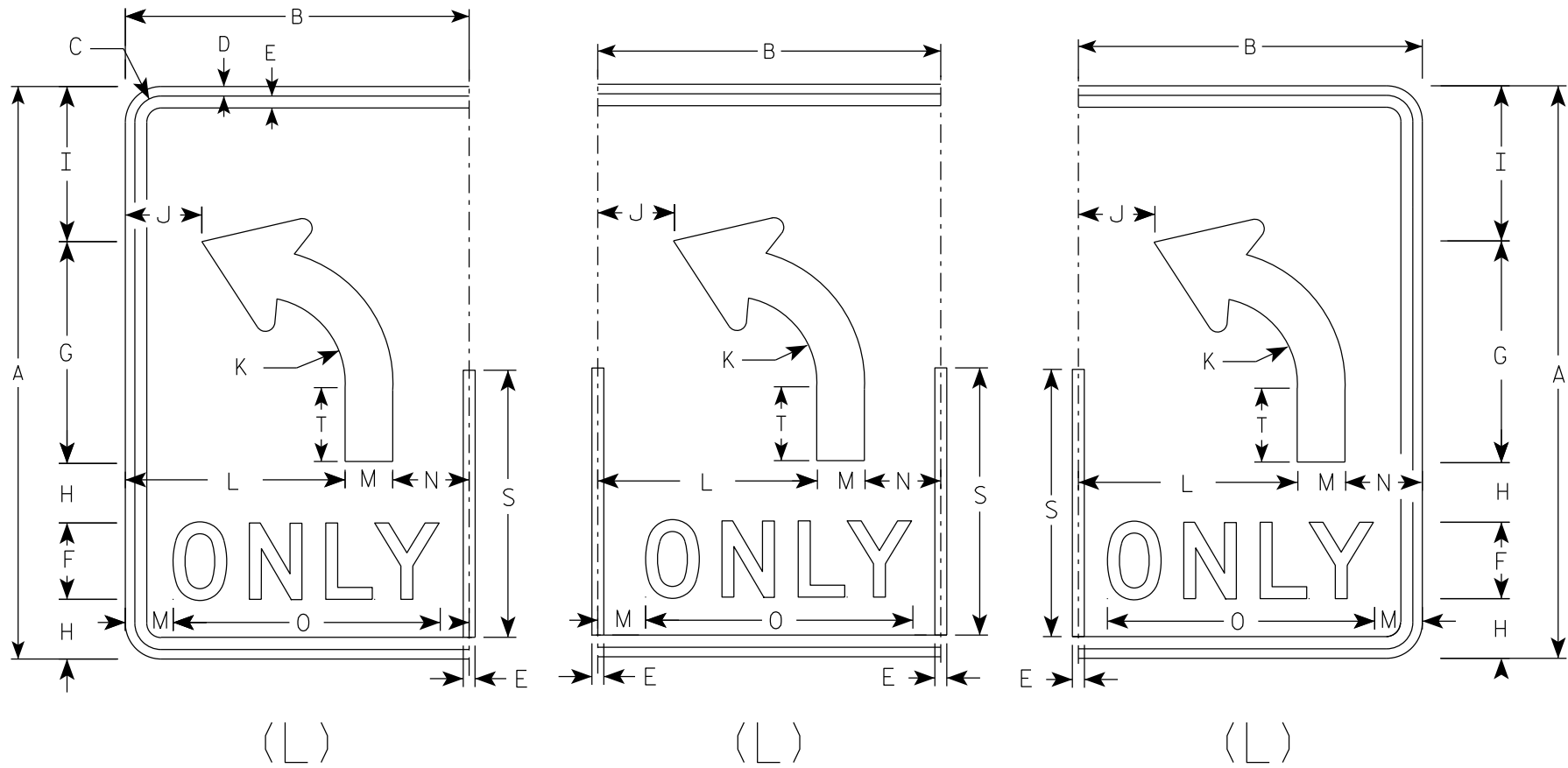
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4		5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8							6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0

STANDARD SIGN
R3-8 (L) Arrow

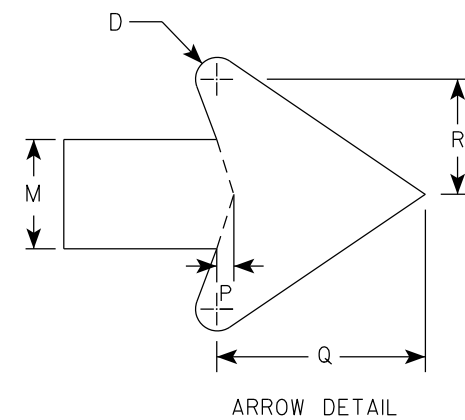
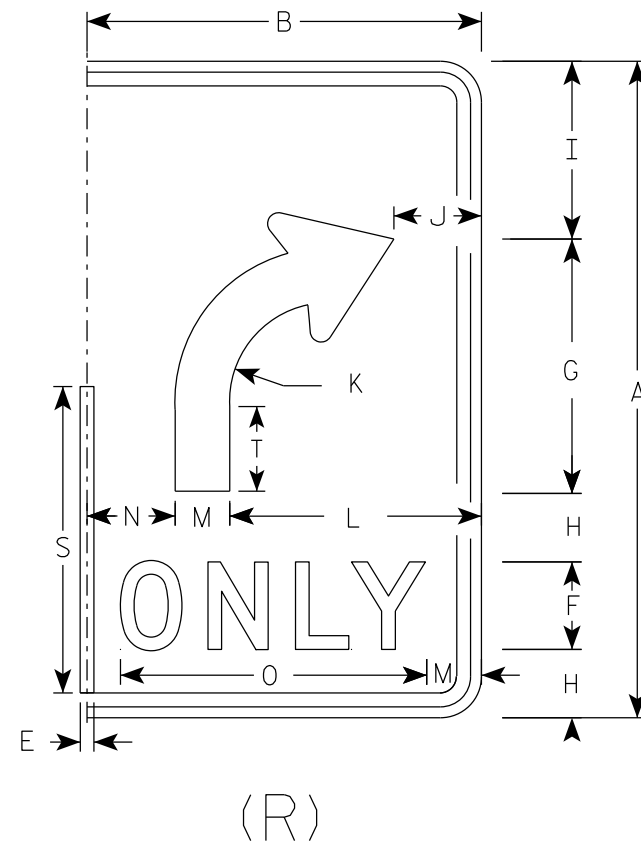
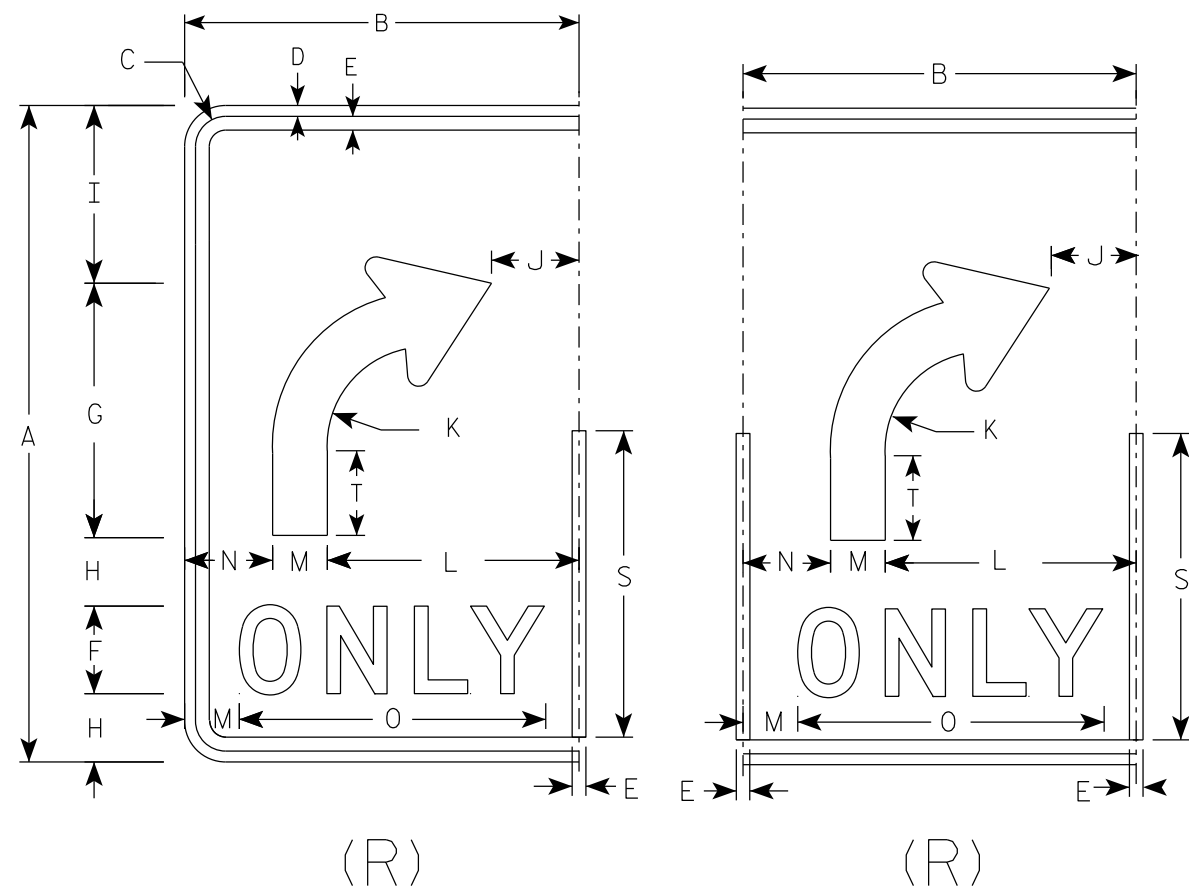
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8	4	11 5⁄8	3 1⁄8	8 1⁄8	4	4 1⁄2	11 1⁄2	2 1⁄2	4	14	3⁄8	4 3⁄4	2 5⁄8	14	3 7⁄8							3.75
3	36	24	1 3⁄8	1⁄2	5⁄8	5	14	3 1⁄2	9 3⁄4	6	5 3⁄8	15	3	6	17 5⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	4 5⁄8							6.0
4	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0
5	48	30	2 1⁄4	3⁄4	1	6	18 5⁄8	5 1⁄8	13 1⁄8	6 1⁄8	7 1⁄4	18	4	8	21 3⁄4	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	6 1⁄4							10.0

STANDARD SIGN

R3-8 (R) Arrow

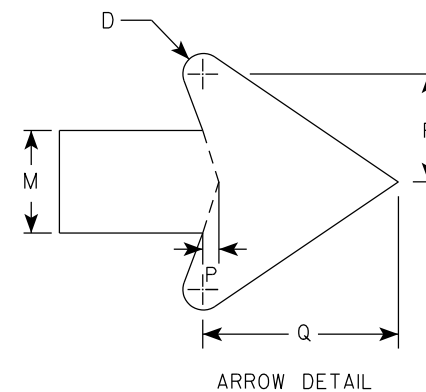
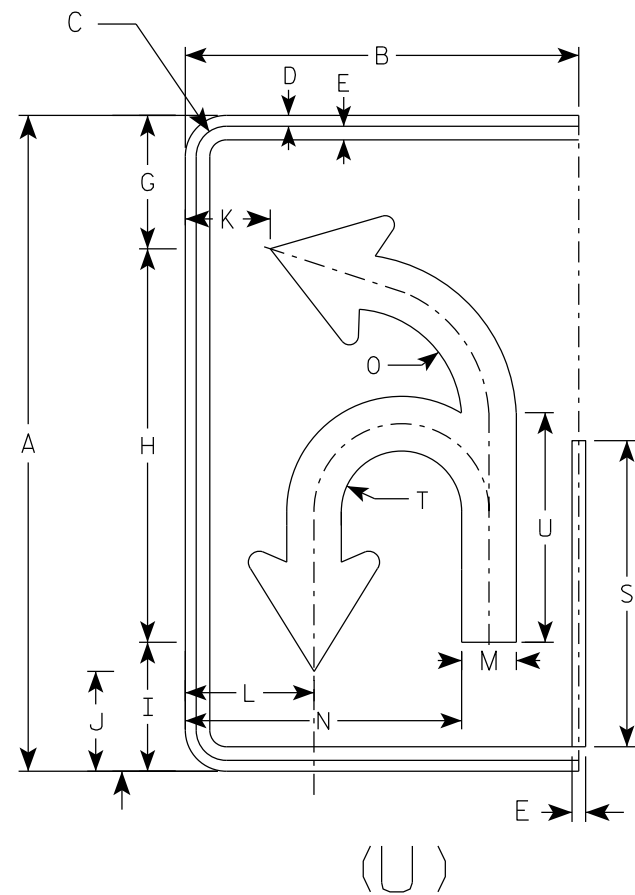
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - None



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	18	1 3⁄8	1⁄2	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 1⁄2	12 5⁄8	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14	2 3⁄4	10 1⁄2						3.75
2M	30	18	1 3⁄8	1⁄2	5⁄8		6 1⁄8	18	5 7⁄8	4 5⁄8	3 7⁄8	5 7⁄8	2 1⁄2	12 5⁄8	5 1⁄8	3⁄8	4 3⁄4	2 5⁄8	14	2 3⁄4	10 1⁄2						3.75
3	36	24	1 3⁄8	1⁄2	5⁄8		21 7⁄8	21 5⁄8	7 1⁄8	5 1⁄2	5 7⁄8	8 1⁄4	3	16 3⁄8	6 1⁄8	1⁄2	5 3⁄4	3 1⁄8	16 3⁄4	3 1⁄4	12 5⁄8						6.0
4	48	30	2 1⁄4	3⁄4	1		29 1⁄8	28 3⁄4	9 3⁄8	7 1⁄4	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	4 3⁄8	16 3⁄4						10.0
5	48	30	2 1⁄4	3⁄4	1		29 1⁄8	28 3⁄4	9 3⁄8	7 1⁄4	6 7⁄8	10	4	20 7⁄8	8 1⁄8	5⁄8	7 5⁄8	4 1⁄4	22 3⁄8	4 3⁄8	16 3⁄4						10.0

STANDARD SIGN

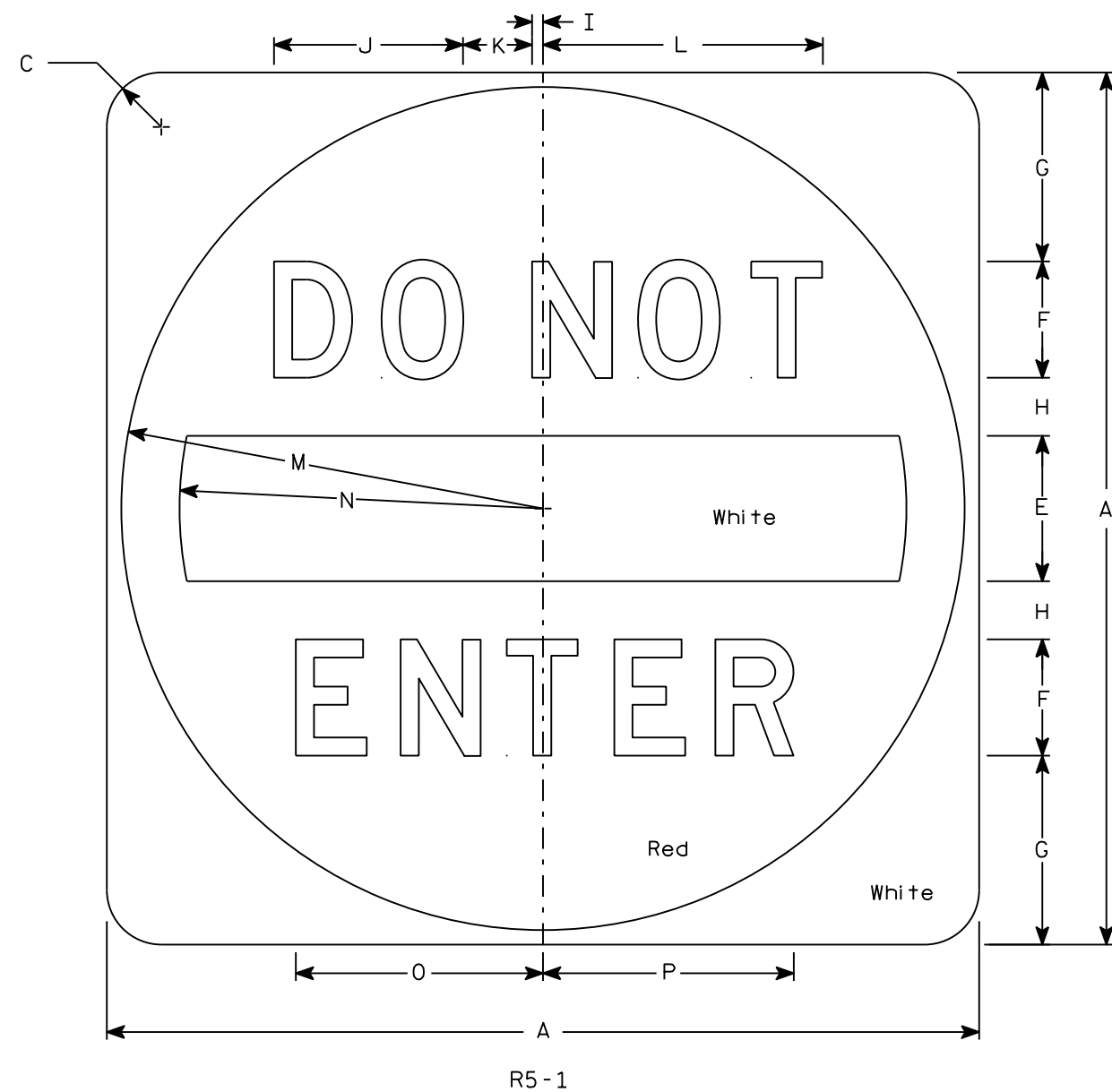
R3-8 (U) Arrow

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/21/19 PLATE NO. R3-8.1

7



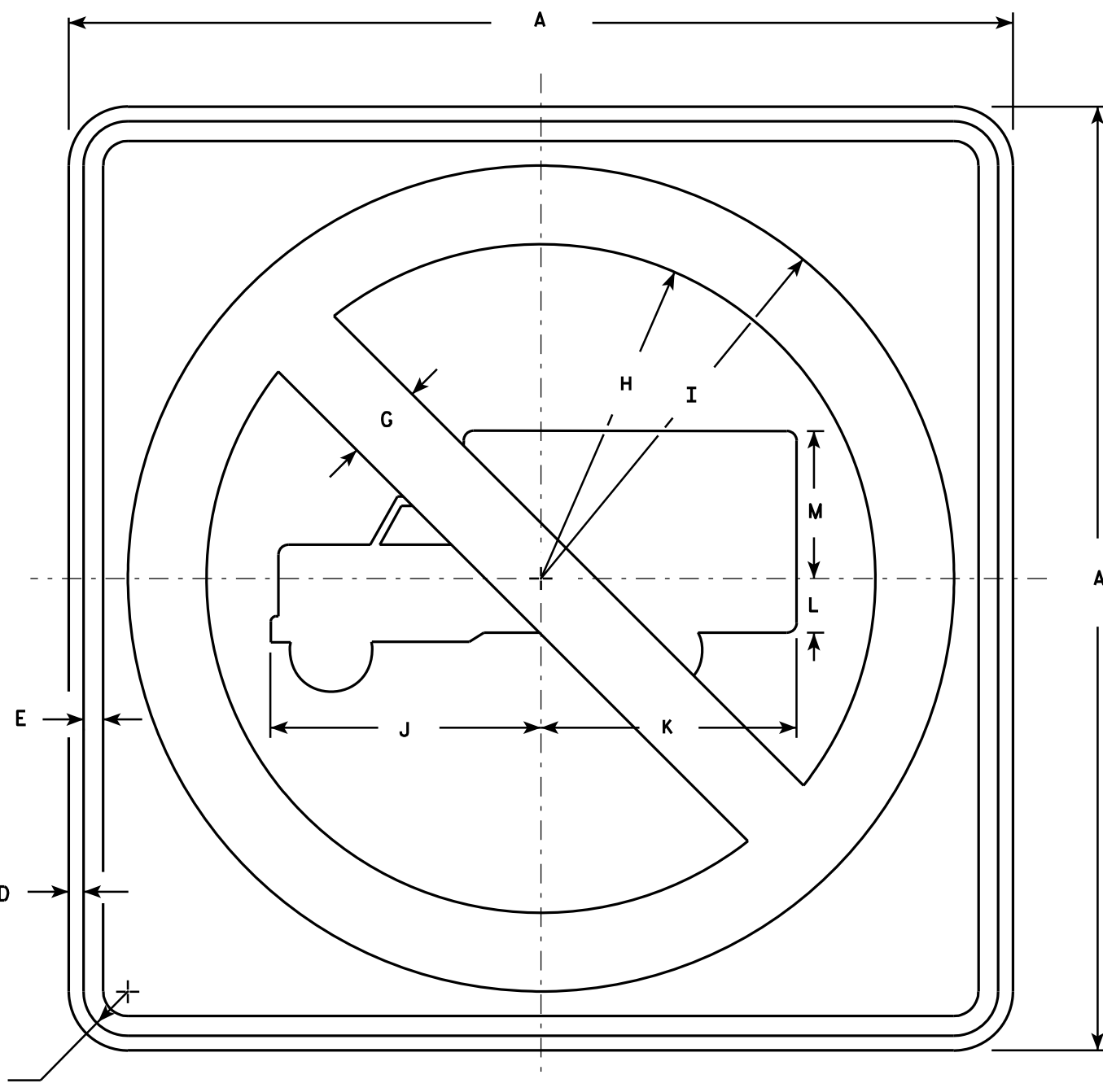
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See detail
Message - White
3. Message Series - D

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.25
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN R5-1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 3/15/18	PLATE NO. R5-1.16



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Circle & Diagonal - Reflective red.
Truck Symbol & Border - Non-reflective black.

R5-2

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
2M	24		1 1/8	3/8	1/2		2	8 1/2	10 1/2	6 7/8	6 1/2	1 3/8	3 3/4														4.0
3	30		1 3/8	1/2	5/8		2 1/2	10 5/8	13 1/8	8 1/2	8 1/8	1 5/8	4 3/4														6.25
4	36		1 5/8	5/8	3/4		3	12 3/4	15 3/4	10 1/4	9 3/4	2	5 3/4														9.0
5	48		2 1/4	3/4	1		4	17	21	13 5/8	13	2 5/8	7 5/8														16.0

STANDARD SIGN

R5-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-2.6

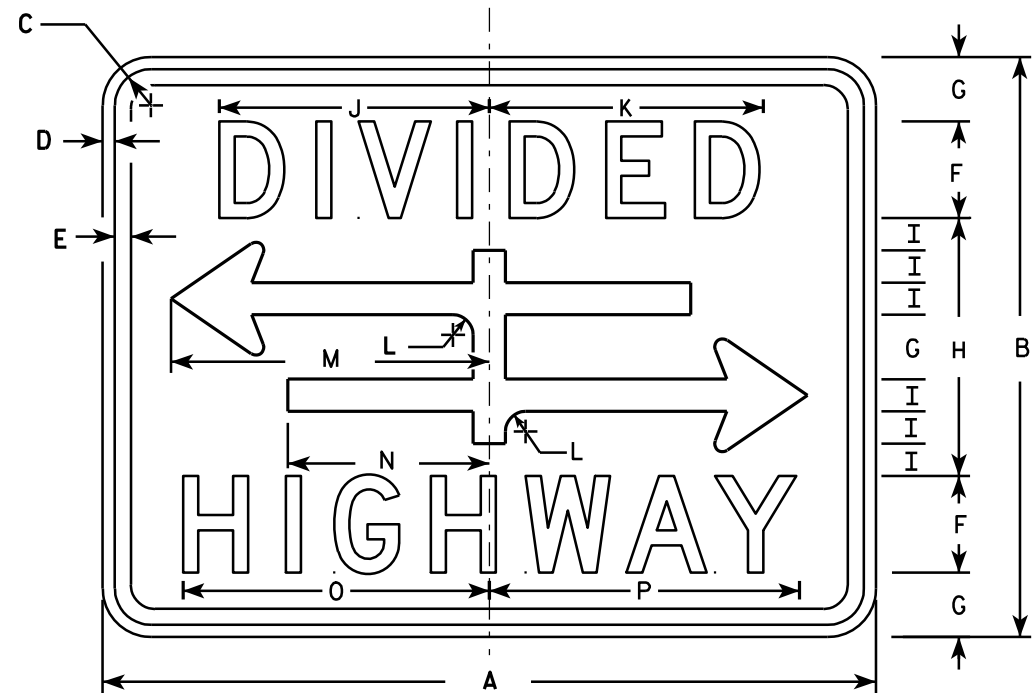
PROJECT NO:

HWY:

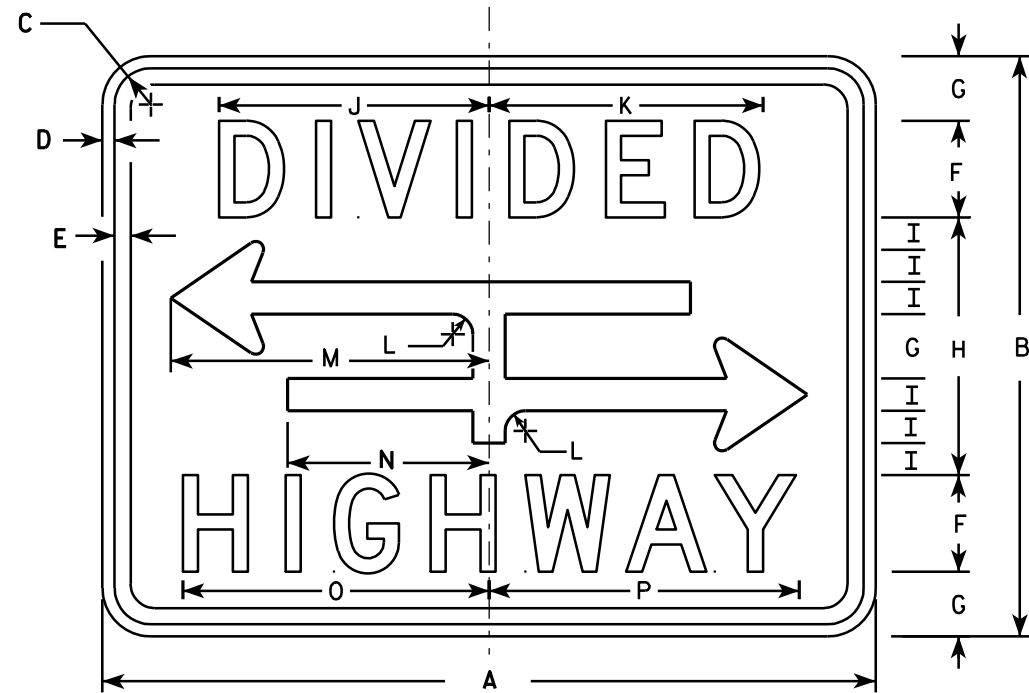
COUNTY:

SHEET NO: 150

E



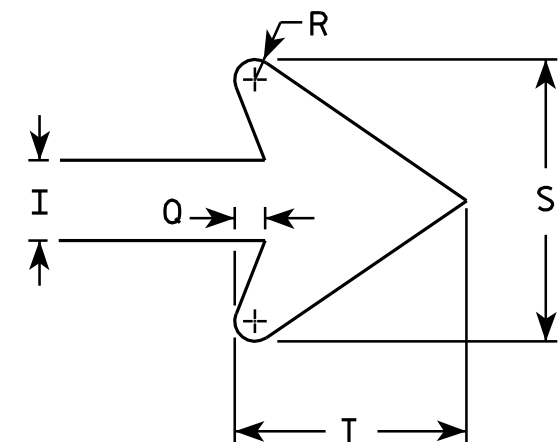
R6-3



R6-3A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN R6-3 & R6-3A

WISCONSIN DEPT OF TRANSPORTATION

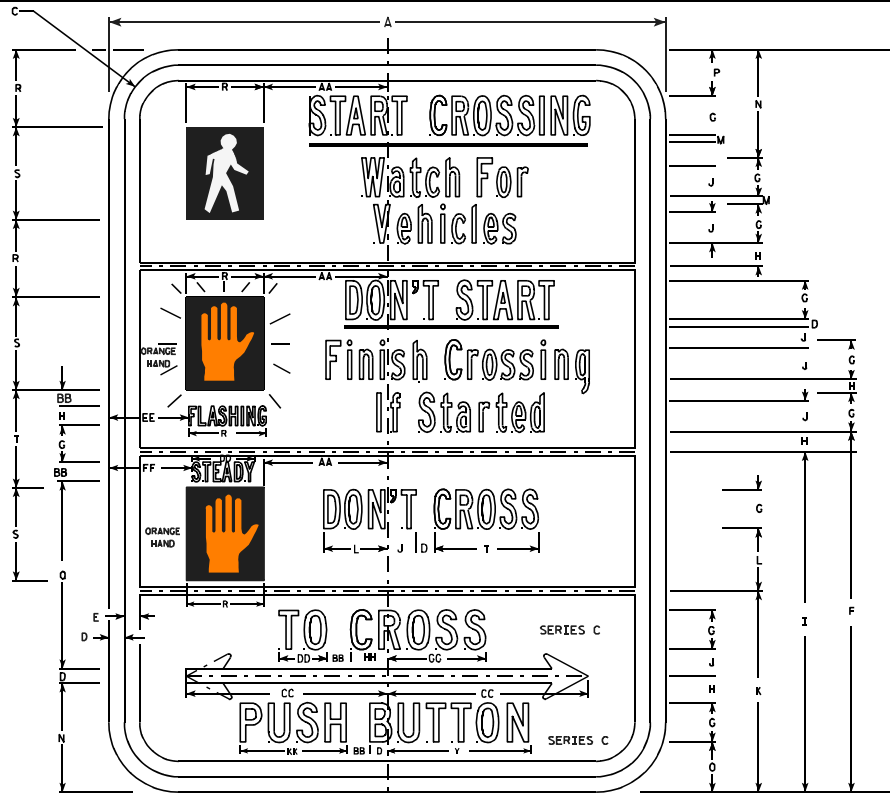
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

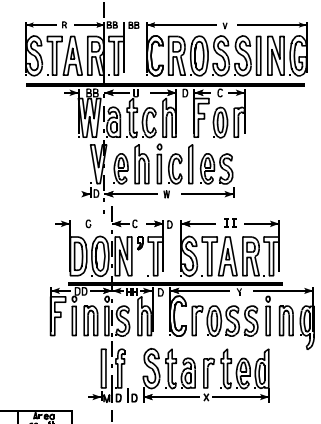
SHEET NO: 151

E



NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - WHITE
Message - BLACK except Hand Symbol which is Orange with black background.
3. Message Series - B or as noted on the sign.
4. R10-3BR (right arrow)
R10-3BL (left arrow)
R10-3BD (double arrow)



R10-3B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	6	9	1/2	1/8	1/8	4 1/4	1/2	1/8	4 1/8	3/8	2 3/8	3/8	1/8	1 3/8	5/8	5/8	2 1/4	3/8	1 1/8	1 1/4	3/4	1 3/4	1 5/8	1 3/8	1 1/2	5/8	0.38
2S	9	12	3/8	1/4	1/4	5 1/8	3/8	3/8	5 1/2	1/2	3 1/4	1	1/8	1 3/4	3/8	3/4	3	1 1/4	1 1/2	1 5/8	1 1/8	2 5/8	2 1/8	2	2 3/8	1 3/8	0.75
2M	9	12	3/8	1/4	1/4	5 7/8	5/8	3/8	5 1/2	1/2	3 1/4	1	1/8	1 3/4	3/8	3/4	3	1 1/4	1 1/2	1 5/8	1 1/8	2 5/8	2 1/8	2	2 3/8	1 3/8	0.75
3																											
4																											
5																											

SIZE	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	UU	VV	WW	XX	YY	ZZ	Area sq. ft.
1	1 1/2	1/4	2 1/4	5/8	5/8	5/8	1 1/8	3/8	1	1/2	1 1/8																
2S	2	3/8	3 1/4	1	1 1/4	1 3/8	1 5/8	5/8	1 5/8	3/4	1 3/4																
2M	2	3/8	3 1/4	1	1 1/4	1 3/8	1 5/8	5/8	1 5/8	3/4	1 3/4																
3																											
4																											
5																											

STANDARD SIGN

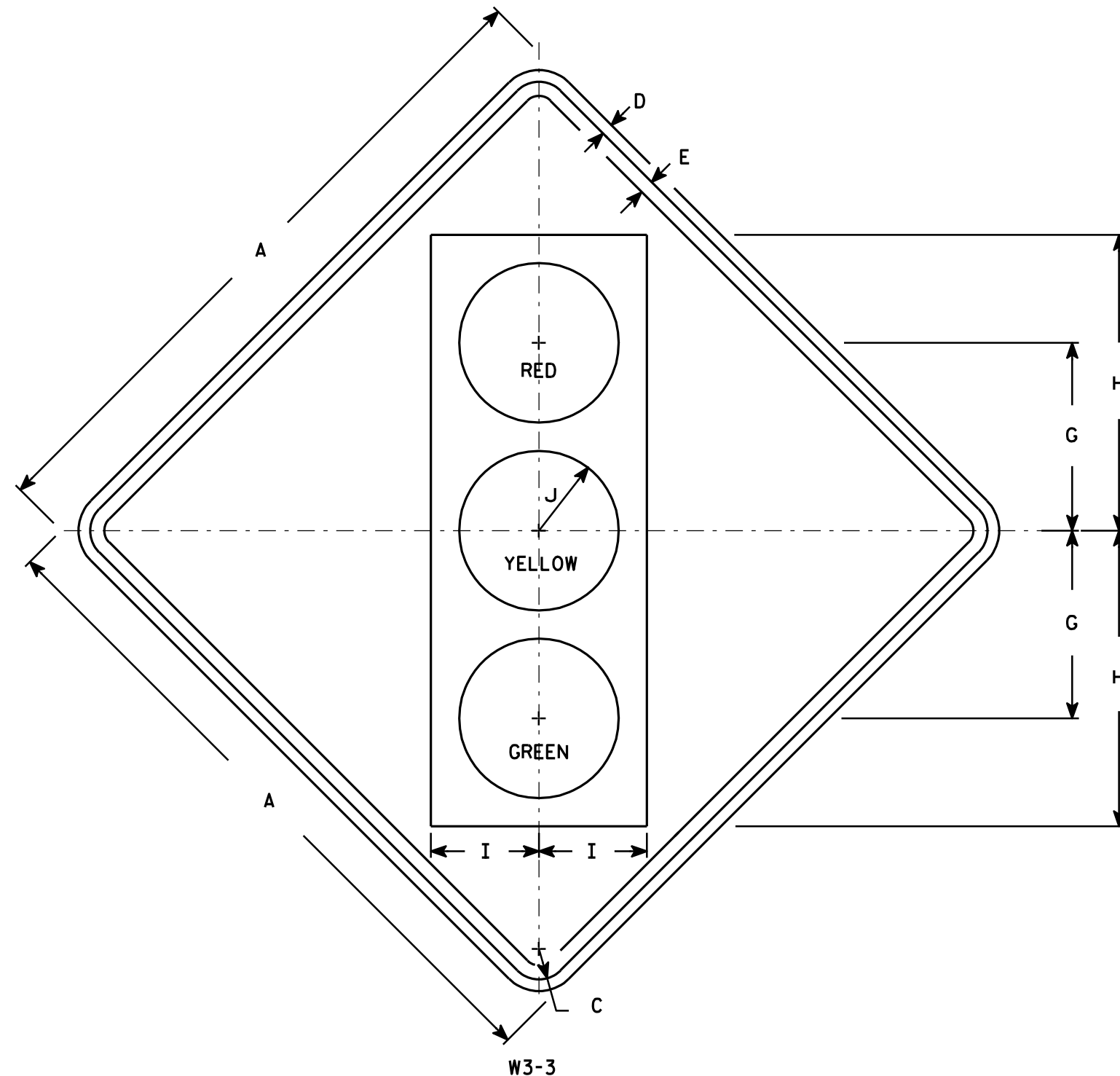
R10-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew P. Rauch*

For State Traffic Engineer

DATE 4/12/11 PLATE NO. R10-3B.2



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Symbol and border are non-reflective black.
Top circle - Type H Reflectorized Red
Center circle - Same as background
Bottom circle - Type H Reflectorized Green

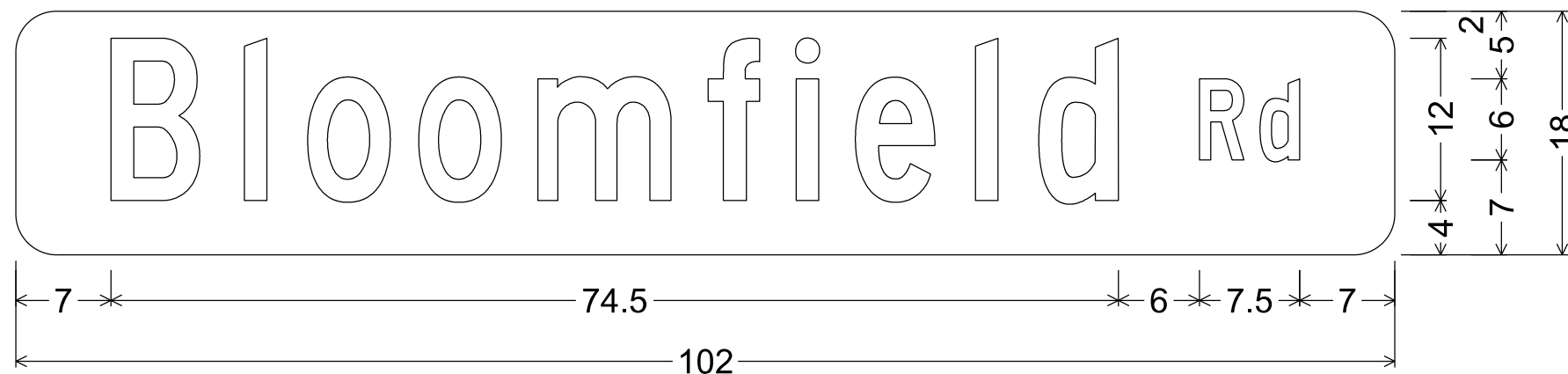
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

PROJECT NO: HWY: COUNTY: SHEET NO: 153 E

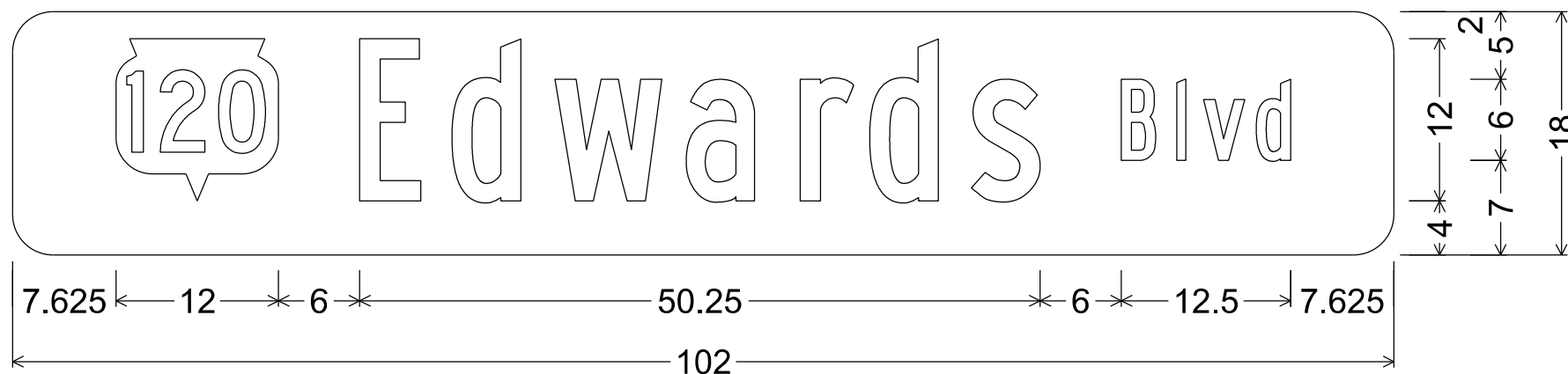
STANDARD SIGN W3-3	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/7/10	PLATE NO. W3-3.11

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - C or as noted



M1-94H; 3.000" Radius, No border



M1-94S; 3.000" Radius, No border
"Edwards", B; "Blvd", B



7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

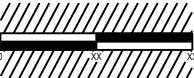
REVISIONS:

#	DATE	DESCRIPTION

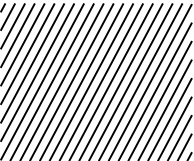
NORTH ARROW:



SCALE: 1" = 100'



SEAL:



all in

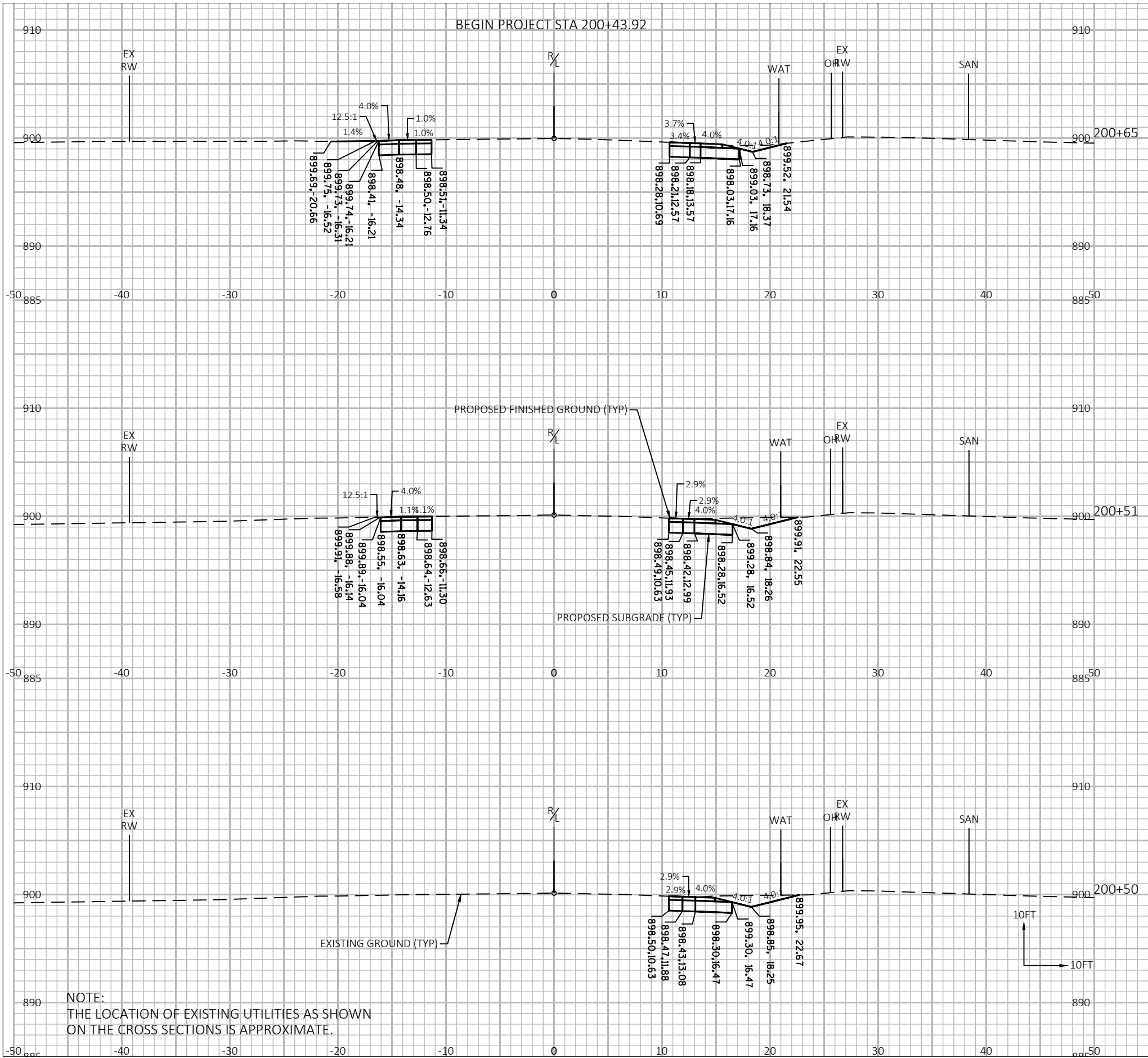
SHEET:

CROSS SECTIONS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

155





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

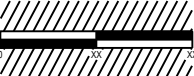
REVISIONS:

#	DATE	DESCRIPTION

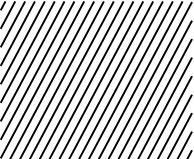
NORTH ARROW:



SCALE: 1" = 100'



SEAL:



all in

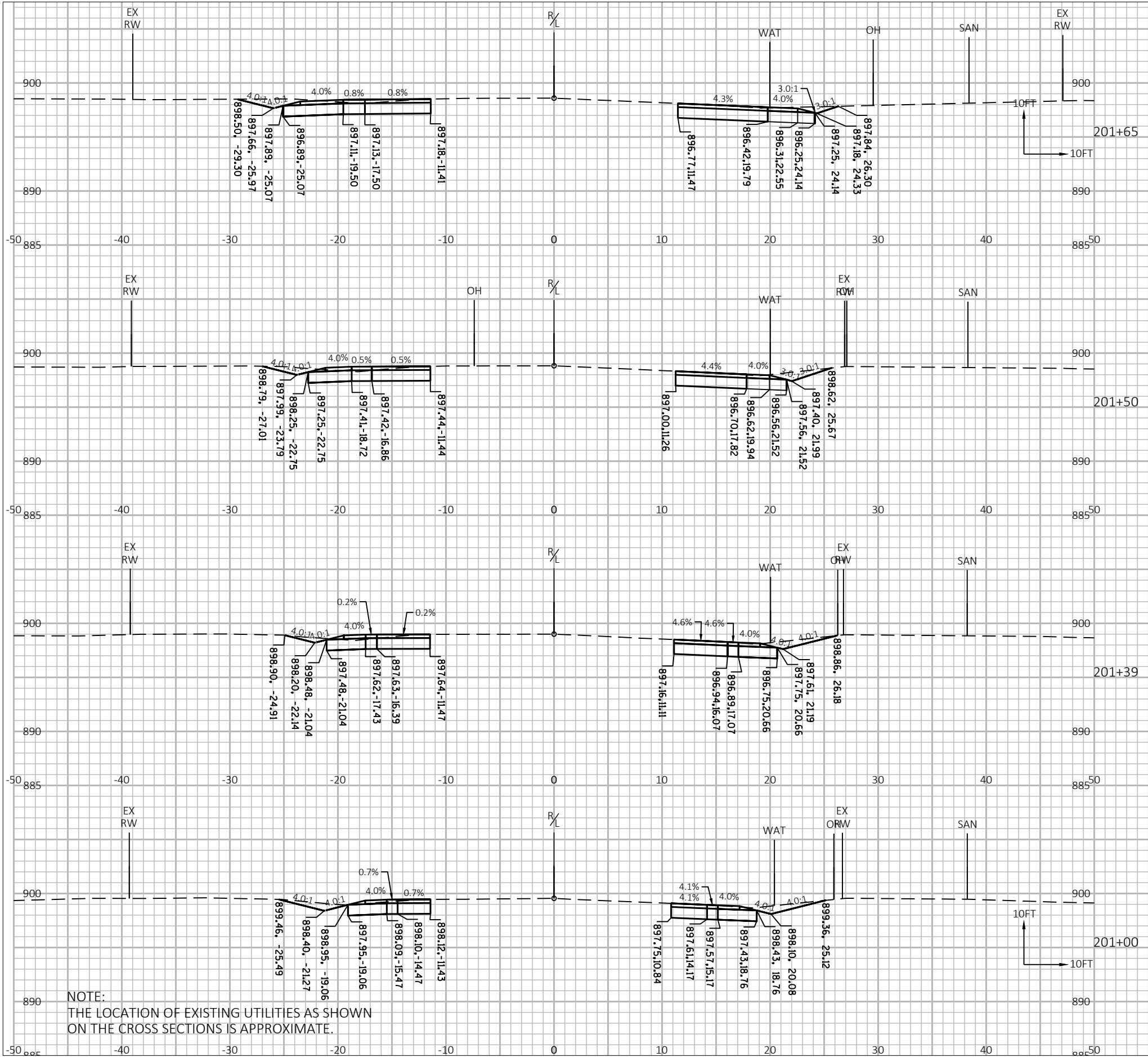
SHEET:

CROSS SECTIONS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

156





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

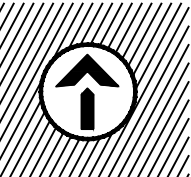


RELEASE:
BID SET

REVISIONS:

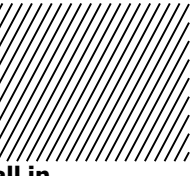
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 100'
0 10 20 30 40 50 60 70 80 90 100

SEAL:



all in

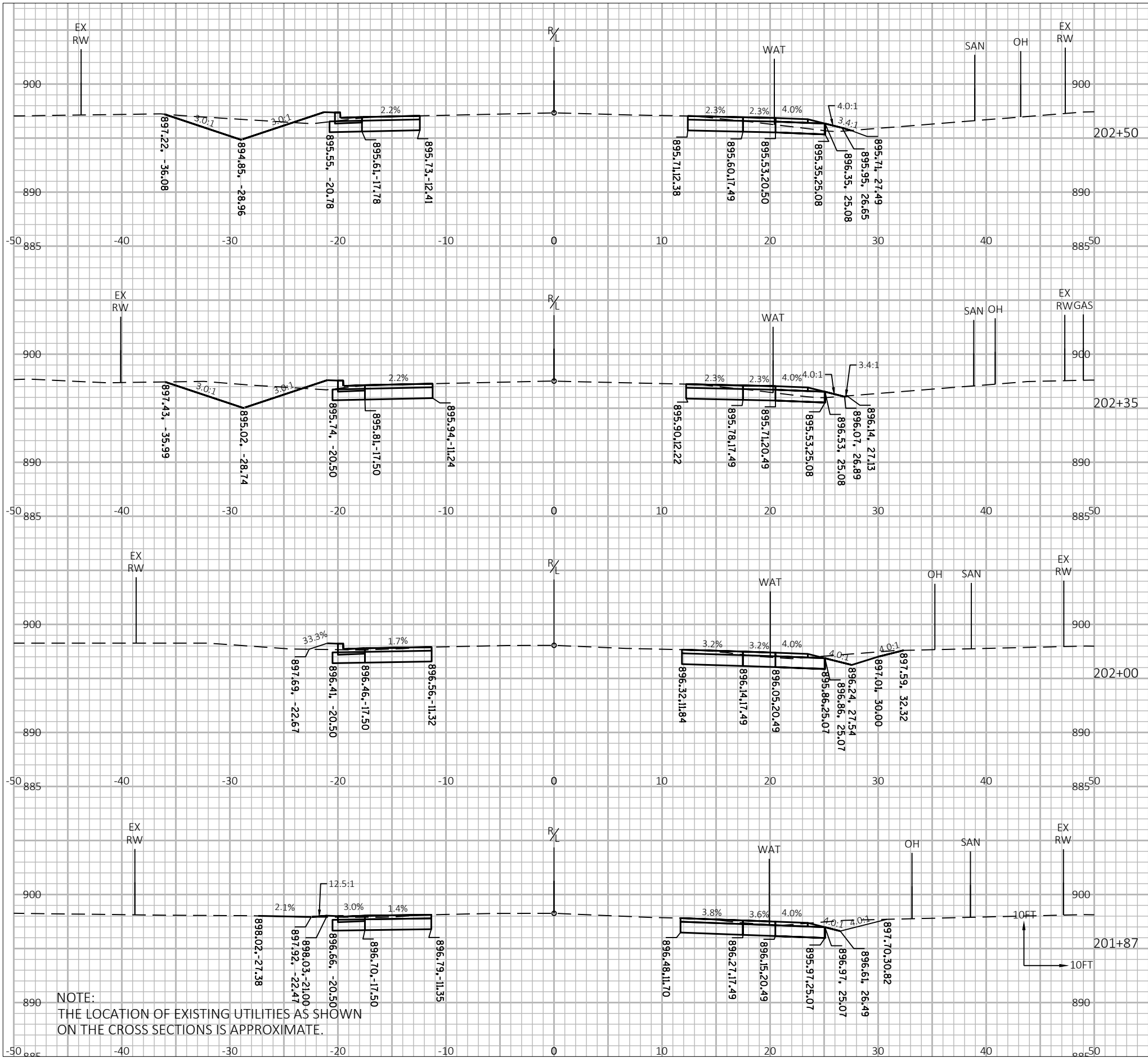
SHEET:

CROSS SECTIONS

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: XXX
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:

157





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:



RELEASE:
BID SET

REVISIONS:

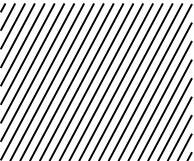
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 100'
0 10 20 30 40 50 60 70 80 90 100

SEAL:



all in

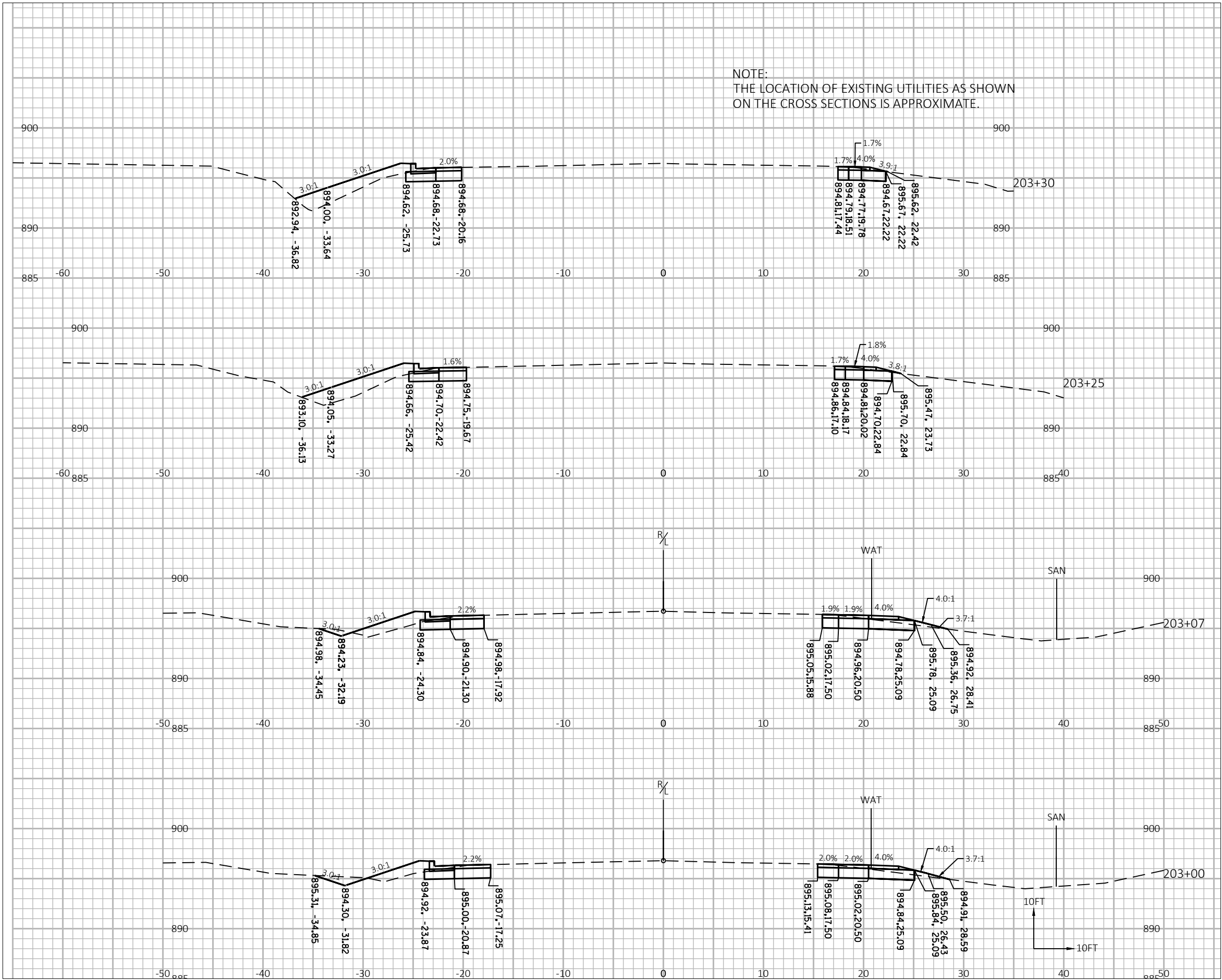
SHEET:

CROSS SECTIONS

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:

158





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

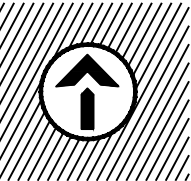


RELEASE:
BID SET

REVISIONS:

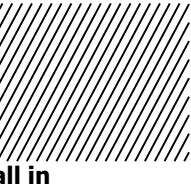
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 100'
0 10 20 30 40 50 60 70 80 90 100

SEAL:



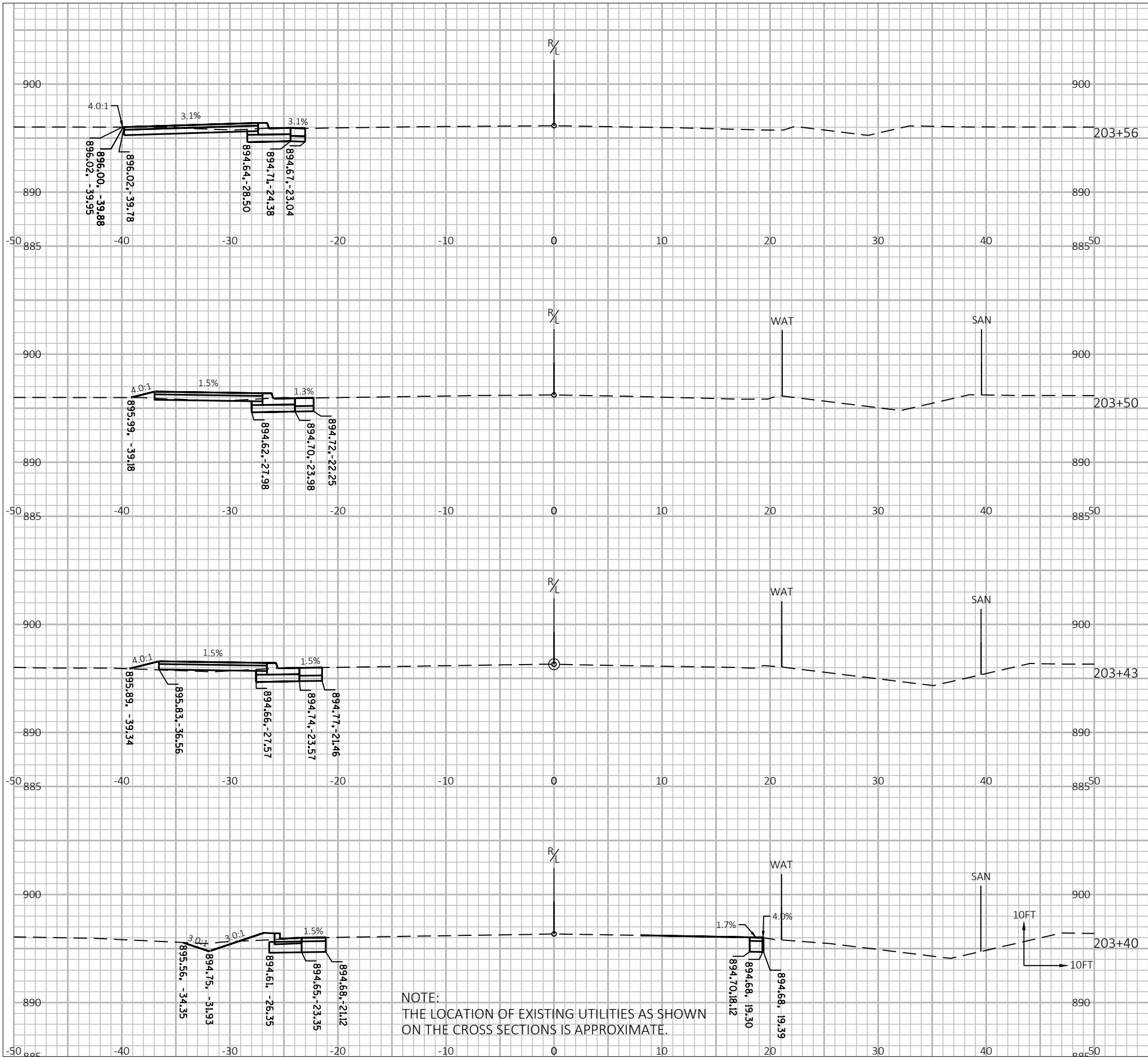
SHEET:

CROSS SECTIONS

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:

159





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

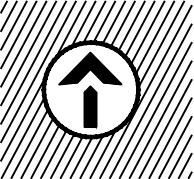


RELEASE:
BID SET

REVISIONS:

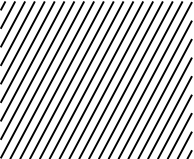
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 100'
0 10 20 30 40 50 60 70 80 90 100

SEAL:



all in

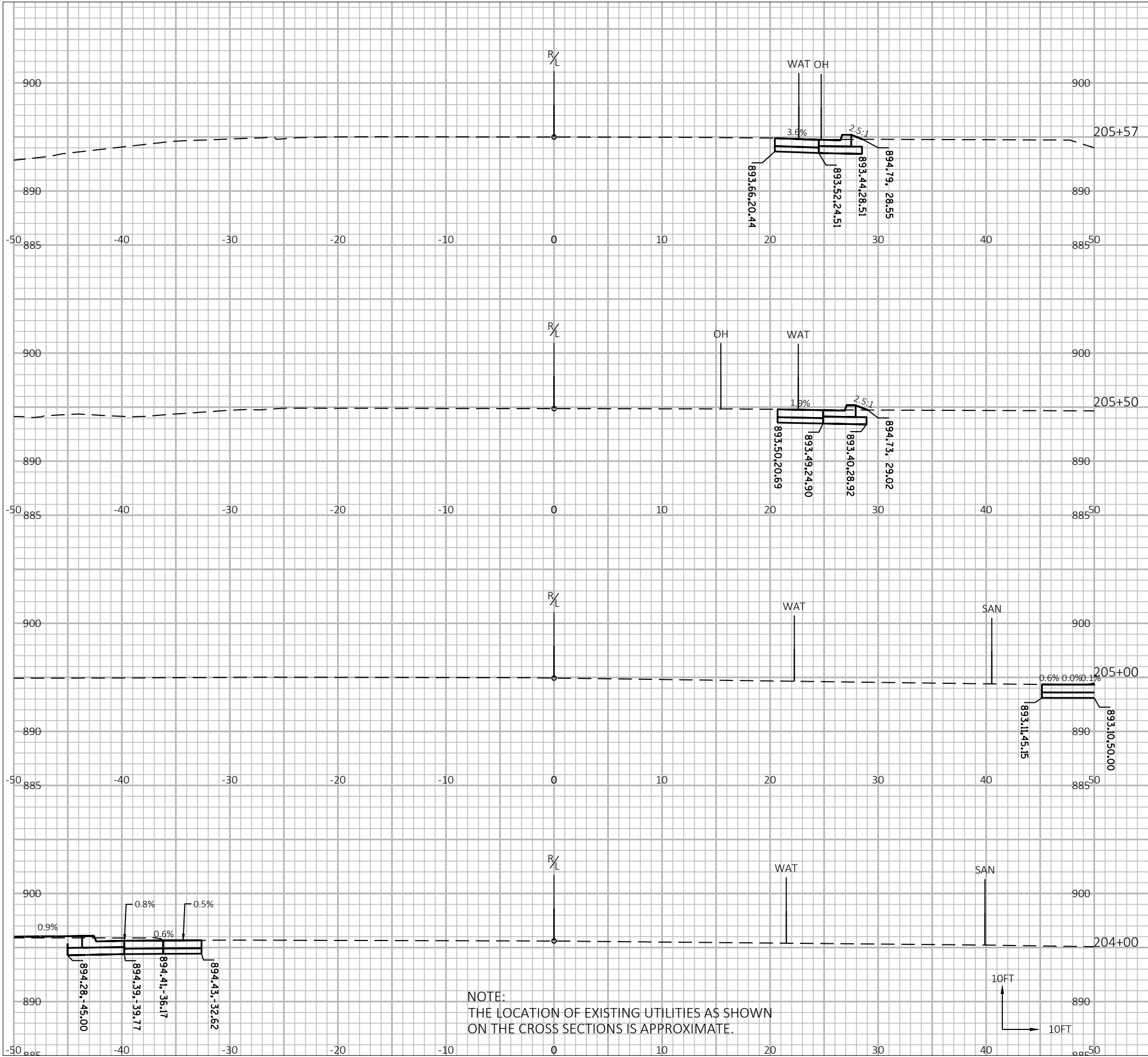
SHEET:

CROSS SECTIONS

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:

160





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

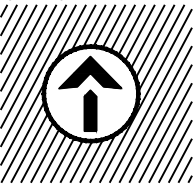


RELEASE:
BID SET

REVISIONS:

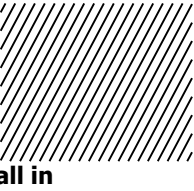
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 100'

SEAL:



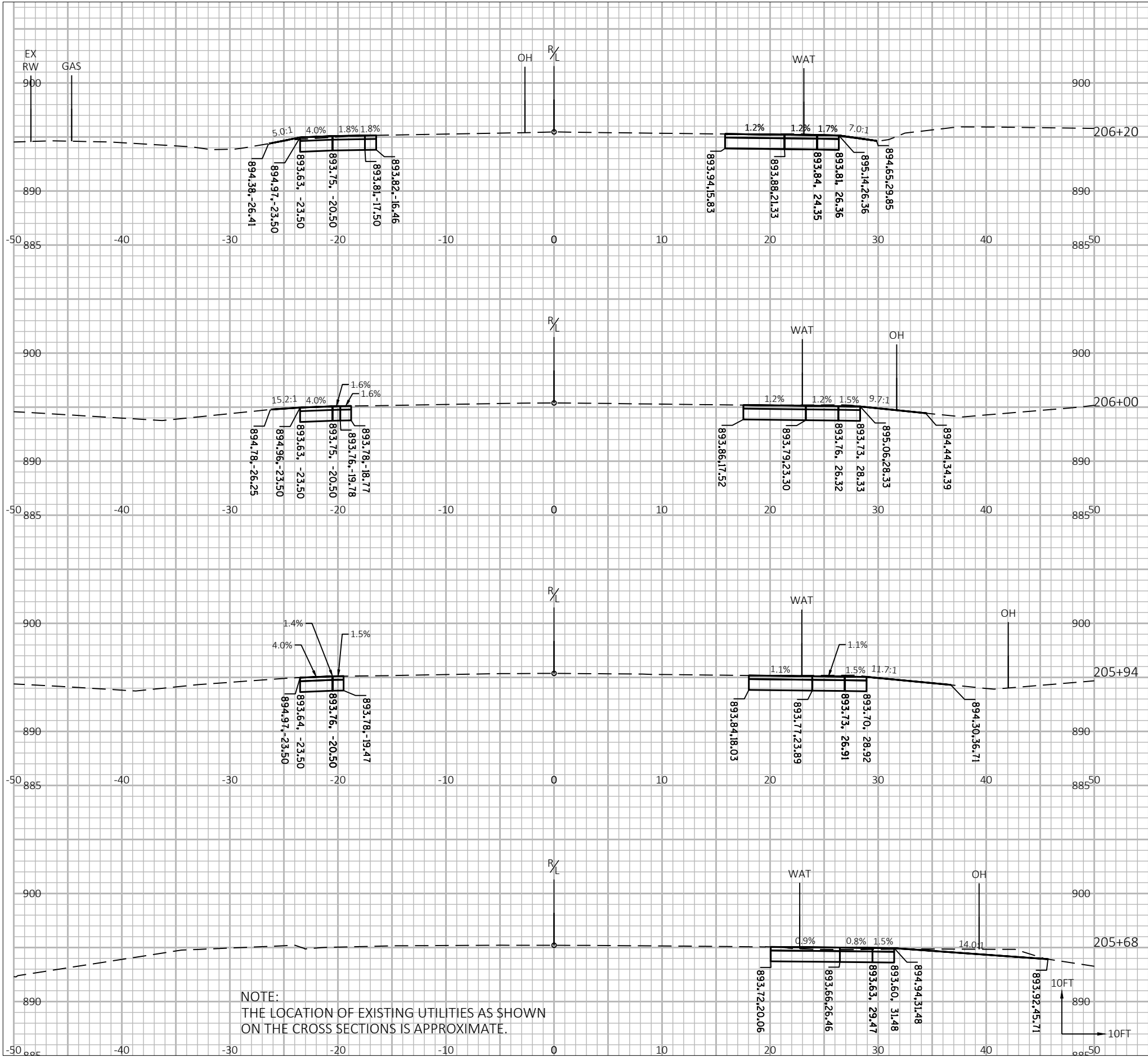
SHEET:

CROSS SECTIONS

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:

161





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
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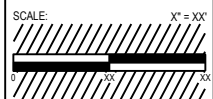
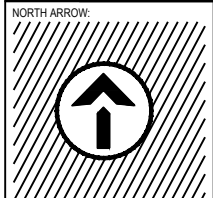
PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION



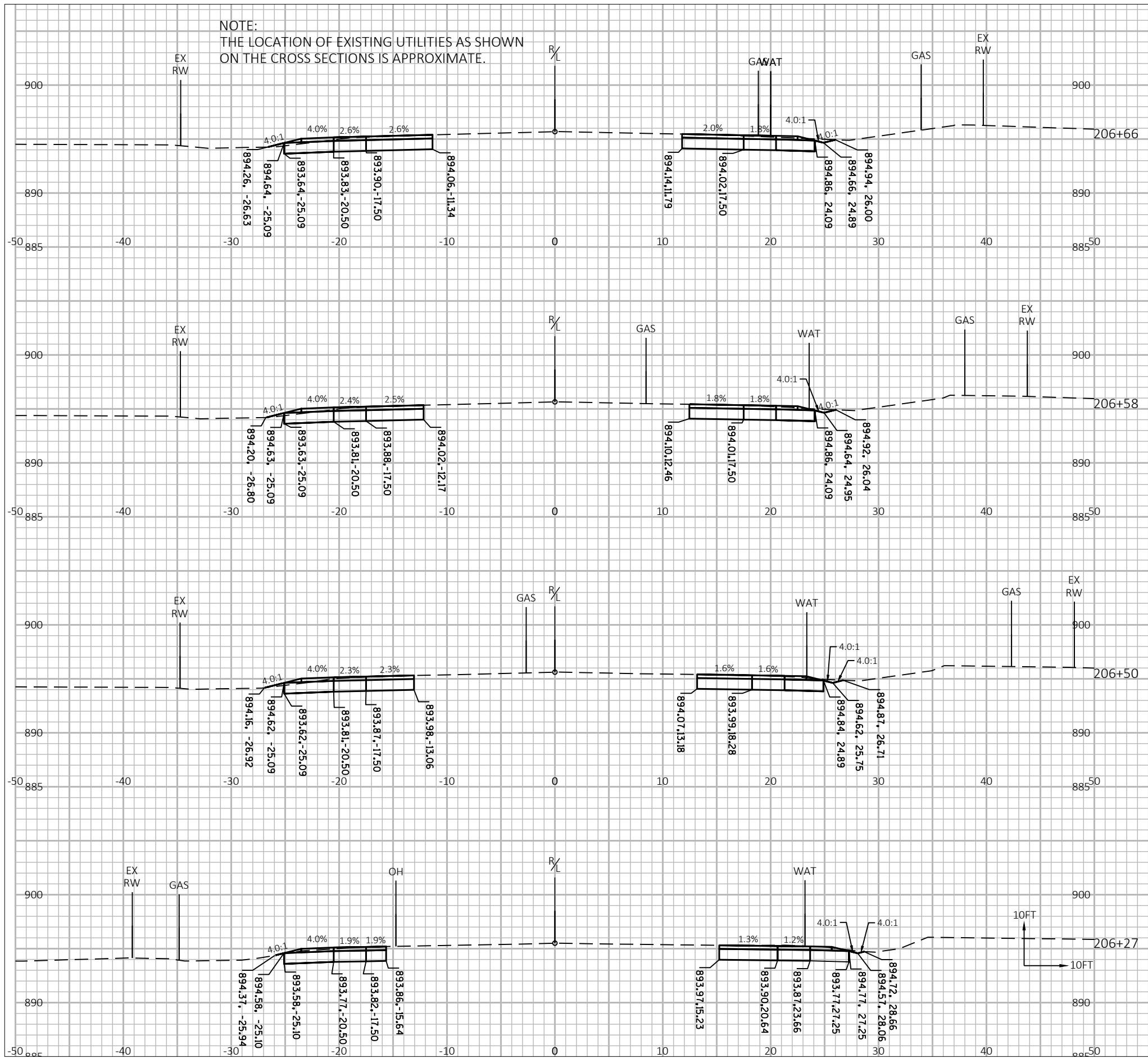
SEAL:

all in

SHEET:
CROSS SECTIONS

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:
162





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
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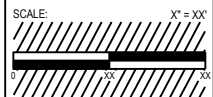
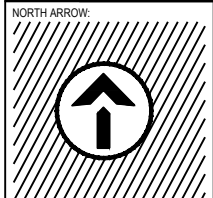
PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA



RELEASE:
BID SET

REVISIONS:		
#	DATE	DESCRIPTION



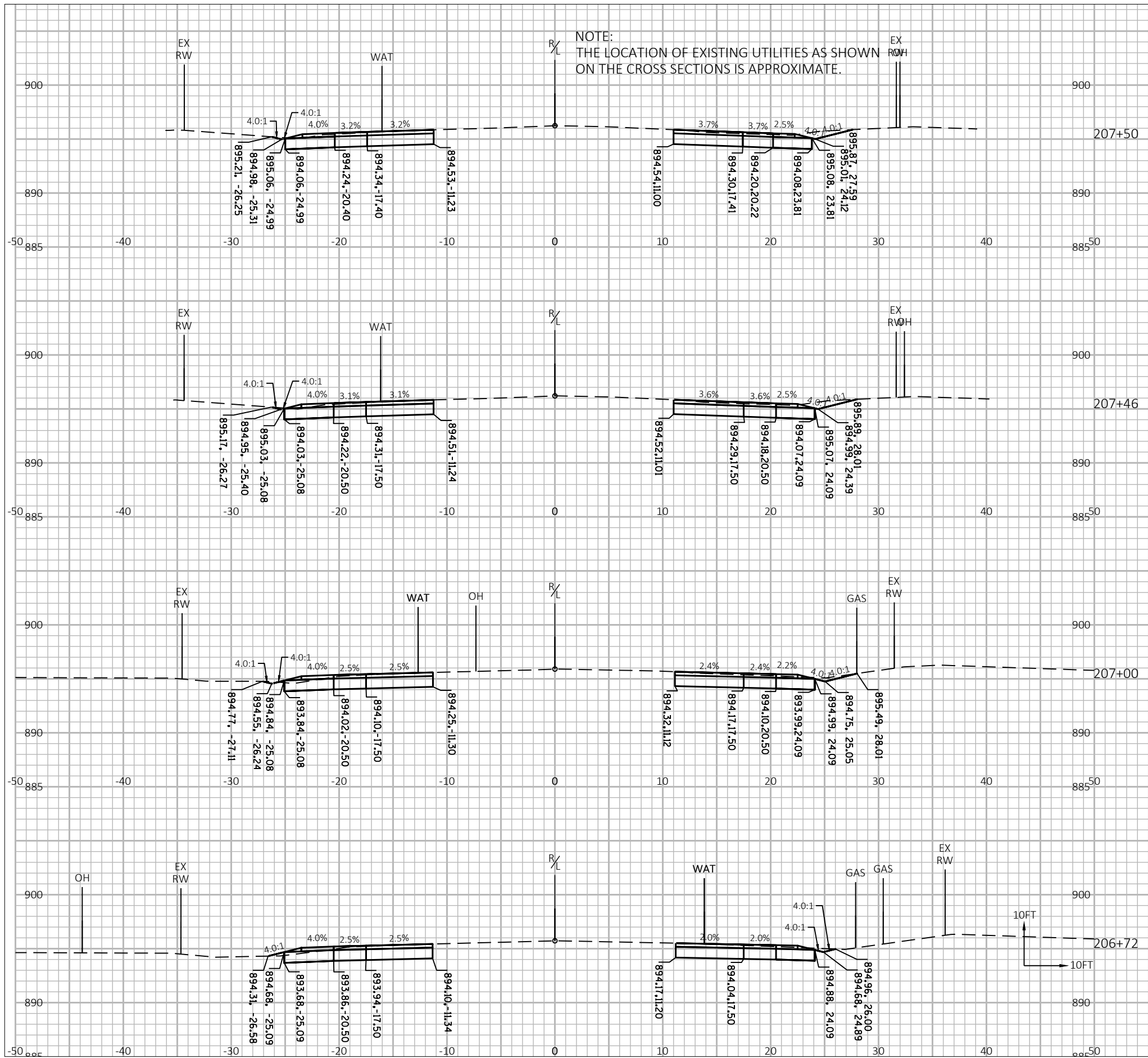
SEAL:

all in

SHEET:
CROSS SECTIONS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:
163





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

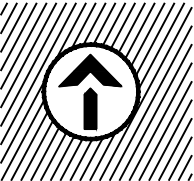


RELEASE:
BID SET

REVISIONS:

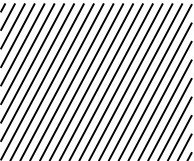
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 100'
0 10 20 30 40 50 60 70 80 90 100

SEAL:



all in

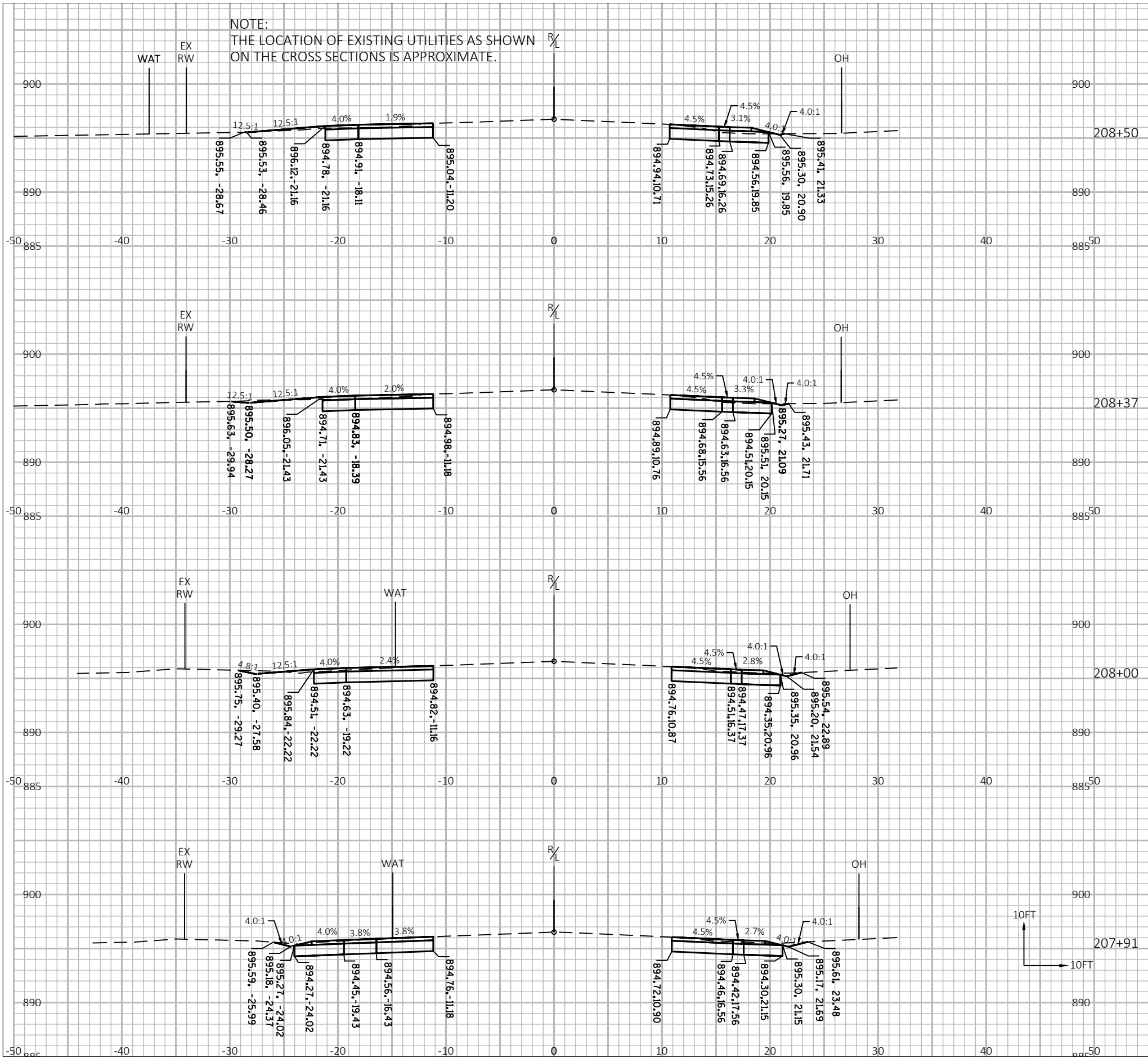
SHEET:

CROSS SECTIONS

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:

164





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

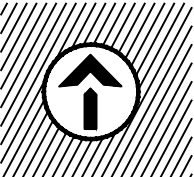


RELEASE:
BID SET

REVISIONS:

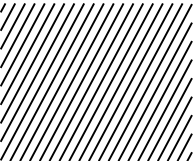
#	DATE	DESCRIPTION

NORTH ARROW:



SCALE: 1" = 100'
0 10 20 30 40 50 60 70 80 90 100

SEAL:



all in

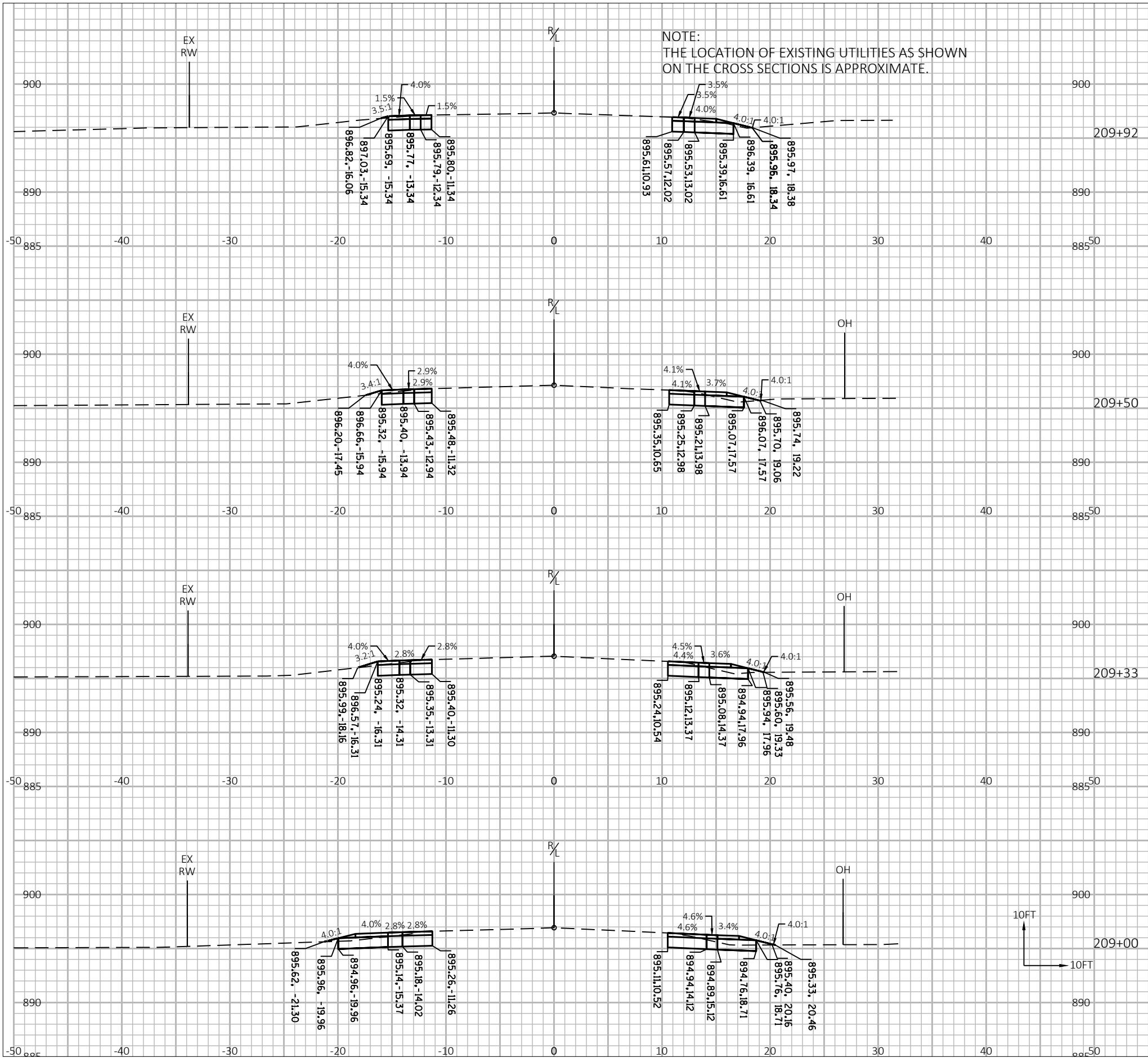
SHEET:

CROSS SECTIONS

PROJECT MANAGER: GLG
PROJECT NUMBER: 21.0437.01
DESIGNED BY: NRS
DRAWN BY: WAW
CHECKED BY: AJB
DATE: 01/13/2022

SHEET NUMBER:

165





7711 N. Port Washington Road
Milwaukee, Wisconsin 53217
kapurinc.com

PROJECT:
BLOOMFIELD ROAD
AT STH 120
(EDWARDS BOULEVARD)
TRAFFIC SIGNAL PROJECT

LOCATION:
LAKE GENEVA

CLIENT:

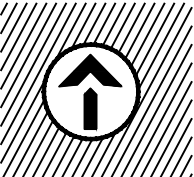


RELEASE:
BID SET

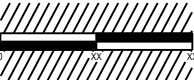
REVISIONS:

#	DATE	DESCRIPTION

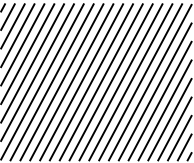
NORTH ARROW:



SCALE: 1" = 100'



SEAL:



all in

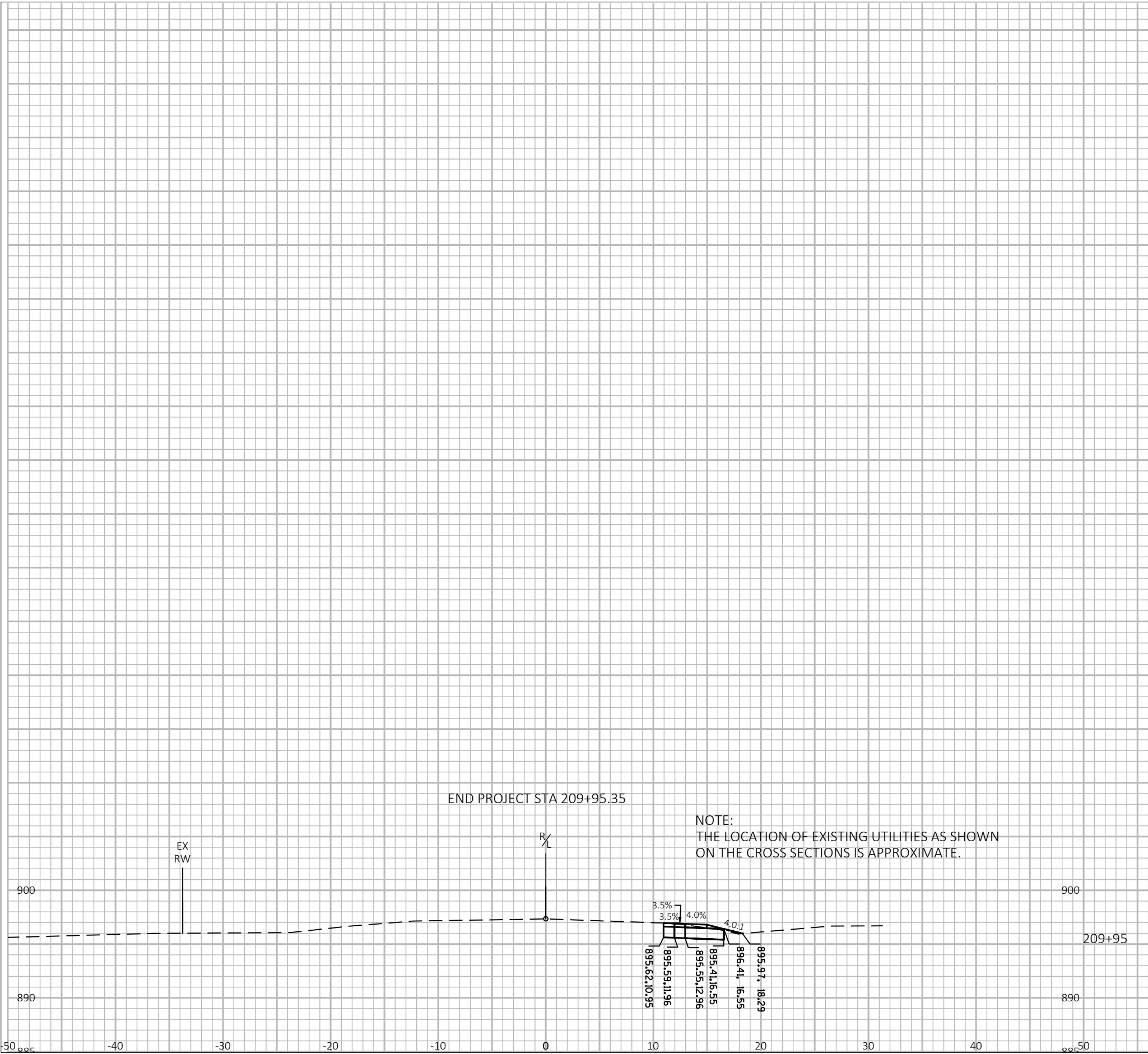
SHEET:

CROSS SECTIONS

PROJECT MANAGER:	GLG
PROJECT NUMBER:	21.0437.01
DESIGNED BY:	NRS
DRAWN BY:	WAW
CHECKED BY:	AJB
DATE:	01/13/2022

SHEET NUMBER:

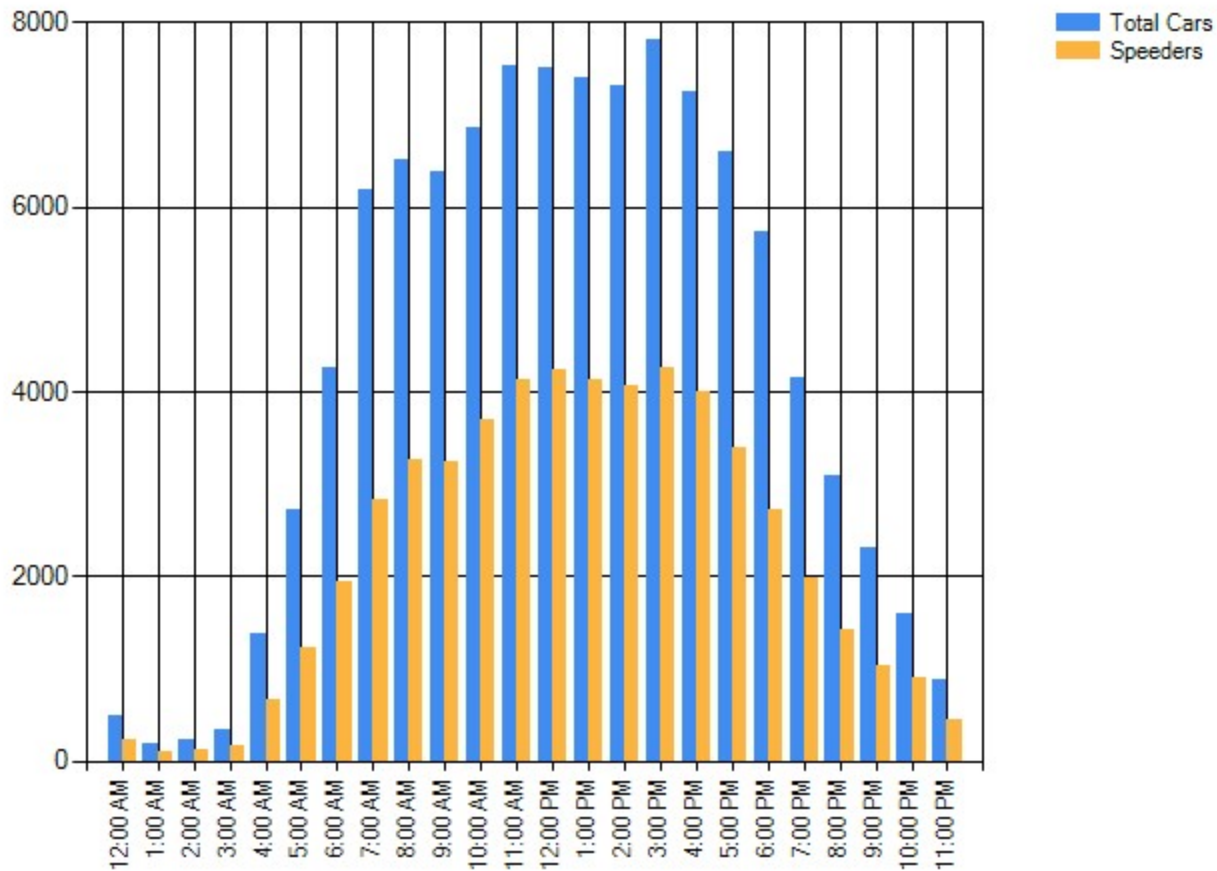
166



Date: 10/27/2021 12:00 AM
Report Start Date: 10/16/2021 10:00 AM
Report End Date: 10/26/2021 04:00 PM
Time Interval: 60 minutes
Speed Interval: 10 mph
Posted Speed Limit: 45 mph
Average Speed: 45 mph
Highest Speed: 97 mph
50th Percentile: 46 mph
85th Percentile: 51 mph
Number Above Speed Limit: 54283
Total Number of Vehicles: 104667

Comments:

Edwards Blvd just south of Townline facing north bound traffic(45mph zone-just south of 30mph zone) (2)





Lake Geneva Police Department
626 Geneva St.
Lake Geneva WI 53147
Phone: (262) 248-4455

2021

Call Simple Lists

Printed On: 01/05/22 13:03

Lake Geneva

Call#	Reported Date	CAD CFS	Location	Common Name	Disp	Unit#	Officer(s)
21-011185	07/13/21 22:25	Accident - Property Damage	Sr 120/Townline;LG		ACR	723	410



Lake Geneva Police Department
626 Geneva St.
Lake Geneva WI 53147
Phone: (262) 248-4455

2021

Call Simple Lists

Printed On: 01/05/22 12:48

Lake Geneva

Call#	Reported Date	CAD CFS	Location	Common Name	Disp	Unit#	Officer(s)
21-008999	06/19/21 11:45	Accident - Property Damage	Townline Rd/S Edwards Blvd;LG		ACR	723	410
21-003667	03/22/21 14:15	Accident - Property Damage	Townline Rd/S Edwards Blvd;LG		ACR	722	409



Lake Geneva Police Department
626 Geneva St.
Lake Geneva WI 53147
Phone: (262) 248-4455

2021

Call Simple Lists

Printed On: 01/05/22 08:14

Lake Geneva

Call#	Reported Date	CAD CFS	Location	Common Name	Disp	Unit#	Officer(s)
21-021587	12/24/21 16:48	Accident - Personal Injury	S Edwards Blvd/E Townline Rd;LG		ACR	719	372
21-016874	09/29/21 18:30	Accident - Fatal	S Edwards Blvd/E Townline Rd;LG		FI	713	183



Lake Geneva Police Department
626 Geneva St.
Lake Geneva WI 53147
Phone: (262) 248-4455

2020

Call Simple Lists

Printed On: 01/06/22 14:43

Lake Geneva

Call#	Reported Date	CAD CFS	Location	Common Name	Disp	Unit#	Officer(s)
20-013883	09/03/20 16:10	Accident - Property Damage	Sr 120/Townline;LG		ACR	714	183
20-005168	04/24/20 15:24	Accident - Property Damage	Townline/Sr 120;LG		FIN	717	350



Lake Geneva Police Department
626 Geneva St.
Lake Geneva WI 53147
Phone: (262) 248-4455

2020

Call Simple Lists

Printed On: 01/06/22 14:43

Lake Geneva

Call#	Reported Date	CAD CFS	Location	Common Name	Disp	Unit#	Officer(s)
20-015397	09/30/20 06:06	Accident - Property Damage	S Edwards Blvd/Townline Rd;LG		FIN	713	214



Lake Geneva Police Department
626 Geneva St.
Lake Geneva WI 53147
Phone: (262) 248-4455

2020

Call Simple Lists

Printed On: 01/06/22 14:44

Lake Geneva

Call#	Reported Date	CAD CFS	Location	Common Name	Disp	Unit#	Officer(s)
20-000003	01/01/20 00:38	Accident - Property Damage	E Townline Rd/S Edwards Blvd;LG		CIT	703	144



Lake Geneva Police Department
626 Geneva St.
Lake Geneva WI 53147
Phone: (262) 248-4455

2019

Call Simple Lists

Printed On: 01/06/22 14:48

Lake Geneva

Call#	Reported Date	CAD CFS	Location	Common Name	Disp	Unit#	Officer(s)
19-005960	05/18/19 09:44	Accident - Personal Injury	Sr 120/Townline;LG		ACR	713	214



Lake Geneva Police Department
626 Geneva St.
Lake Geneva WI 53147
Phone: (262) 248-4455

2019

Call Simple Lists

Printed On: 01/06/22 14:49

Lake Geneva

Call#	Reported Date	CAD CFS	Location	Common Name	Disp	Unit#	Officer(s)
19-017300	11/11/19 05:54	Accident - Property Damage	S Edwards Blvd/Townline Rd;LG		ACR	714	183







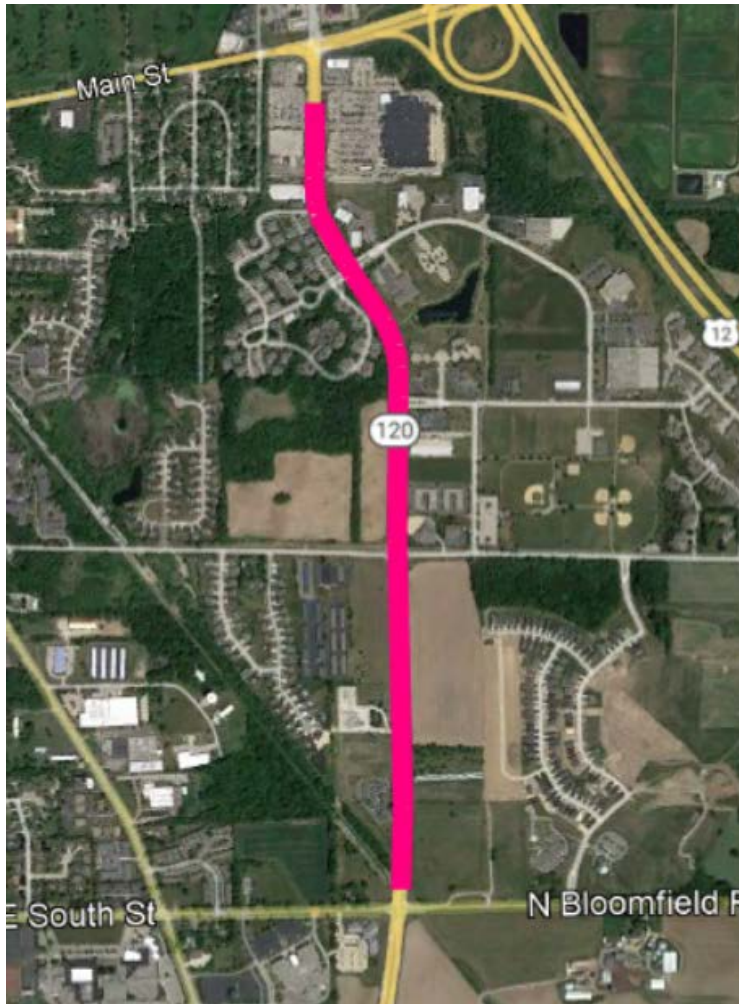


From: [Cindy Flower](#)
To: [Tom Earle](#); [City Clerk](#)
Cc: [City Administrator](#); [Mary Jo Fesenmaier](#); [Mayor](#)
Subject: Re: Mowing - cost savings
Date: Monday, January 17, 2022 6:12:58 PM
Attachments: [pastedImage.png](#)
[pastedImage.png](#)
[pastedImage.png](#)
[pastedImage.png](#)

Tom - Couple Areas to consider for the mowing cost savings for the Jan PWC Meeting are listed below. If PWC agrees to pursue perhaps we could discuss cost savings in Feb?

Lana - please include this in the packet for Jan PWC - thanks

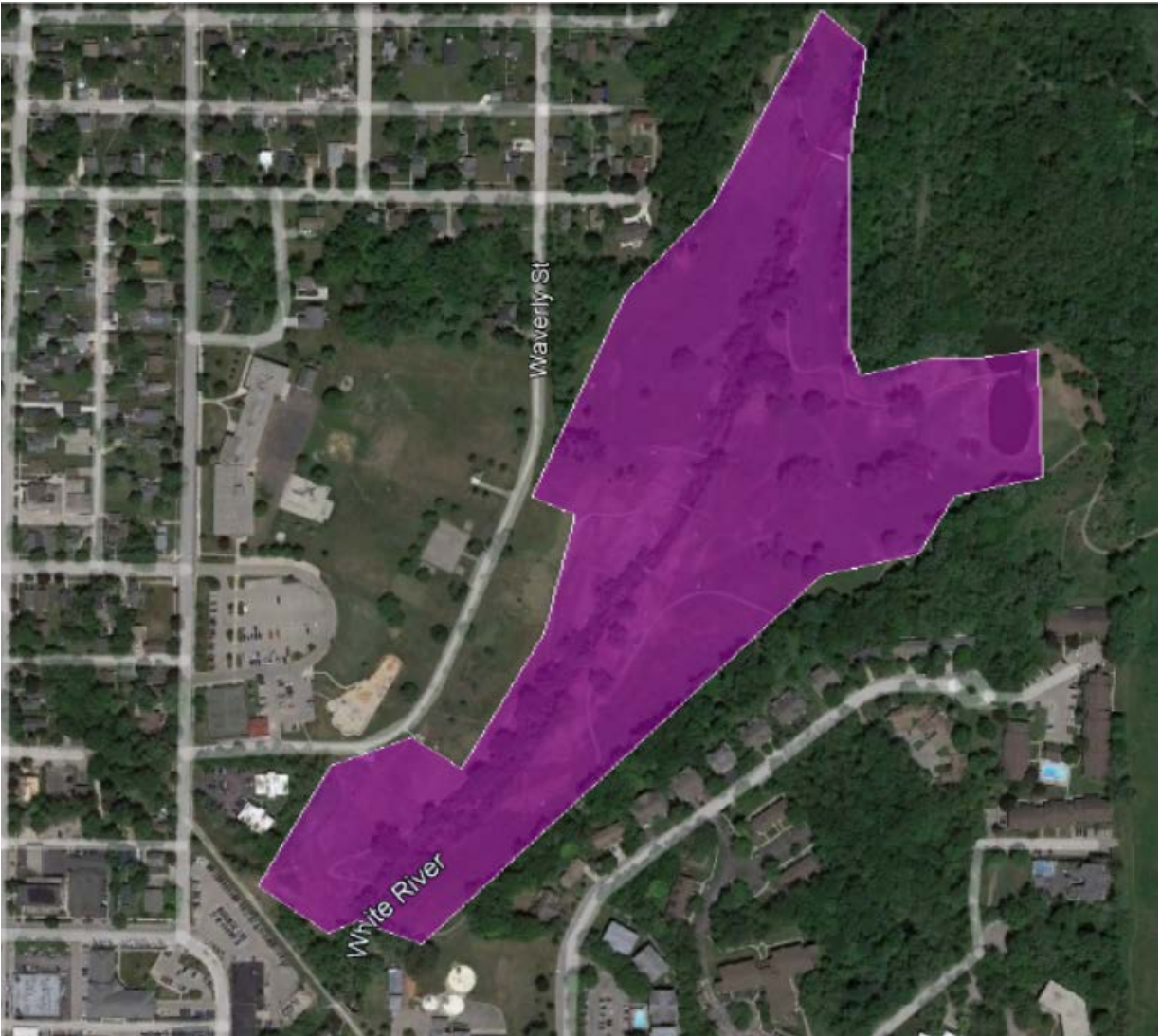
Edwards Blvd (Main to Bloomfield)



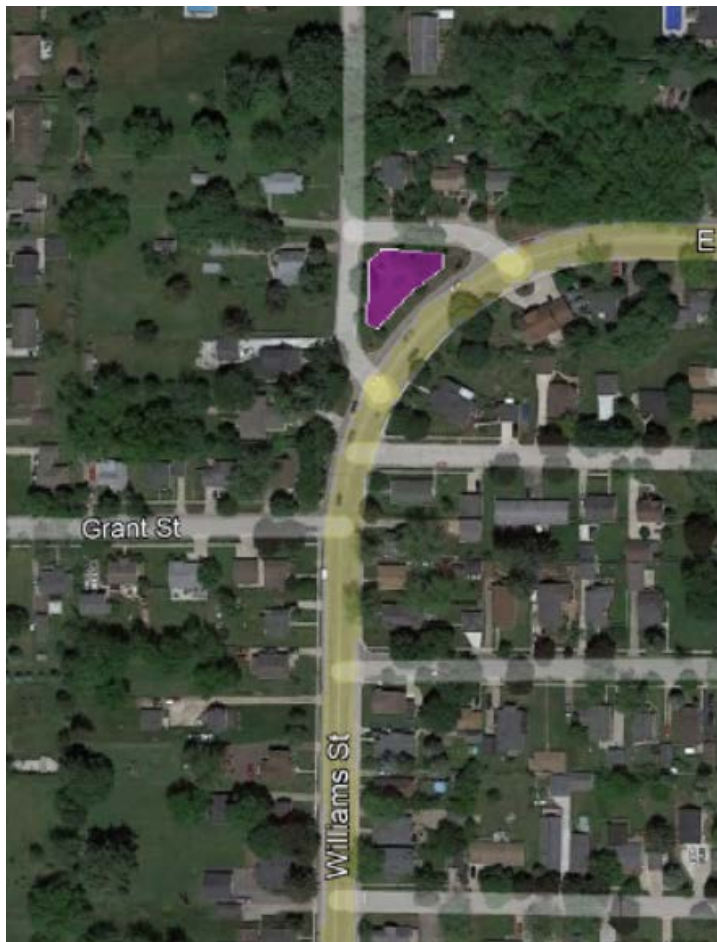
Possibly along the lakefront from the beach to Baker St in the steep areas



The Disc Golf Course



Triangular Park between Williams St and Center St



Others?

Cindy

From: Tom Earle

Sent: Sunday, January 2, 2022 6:23 AM

To: Cindy Flower

Cc: City Administrator; Mary Jo Fesenmaier; Carol Zimmermann; Jill Rodriguez; Karen Gallo; Beverly Leonard; Sarah McConnell; Kelley Happ; Mayor

Subject: Re: Mowing - cost savings

Good morning,

I would need a list of areas Council would like this done before I can get any cost estimate.

Tom Earle, Director

City of Lake Geneva Department of Public Works

Streets, Parks, Lakefront, Forestry, Cemeteries, Buildings and Grounds

1065 Carey St. Lake Geneva WI. 53147

(262)248-6644

Shipping/Receiving hours: Monday, 5am-2pm. Tues-Thurs, 6am-2pm. NO FRIDAYS. Call for Holiday schedules.

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email in error, please notify the sender, delete the email and do not use, disclose or store the information it contains.

From: Cindy Flower

Sent: Tuesday, December 28, 2021 11:51:09 AM

To: Tom Earle

Cc: City Administrator; Mary Jo Fesenmaier; Carol Zimmermann; Jill Rodriguez; Karen Gallo; Beverly Leonard; Sarah McConnell; Kelley Happ; Mayor

Subject: Mowing - cost savings

Tom - could you please report out at the Jan PWC if we have an opportunity for some of these mowing cost saving in Lake Geneva?

Native planting materials would also be supported by our Avian Committee.

This is Rotherham where council have planted 8 miles of wild flower verges. It has saved 25k in mowing costs. These photos posted by British Beekeeping Association!

