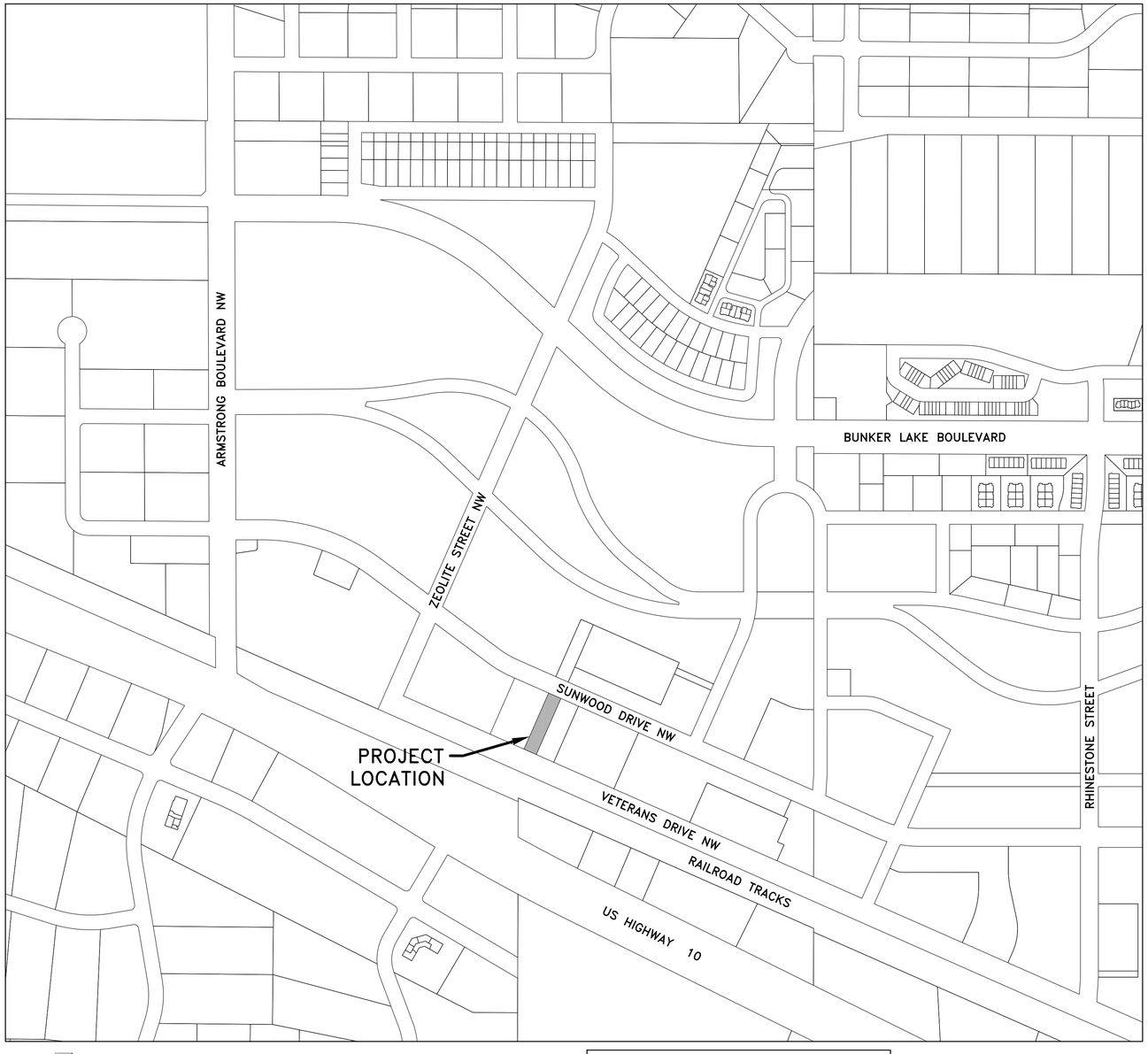
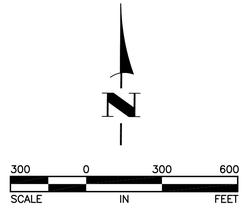
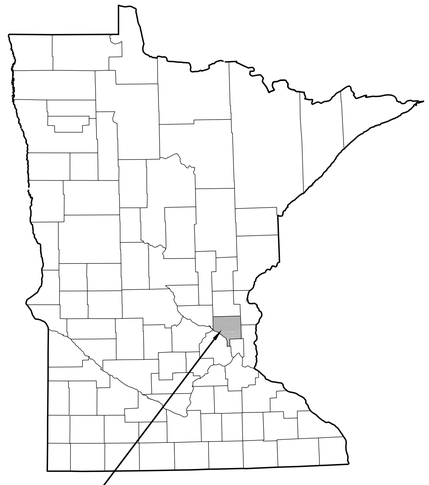
# YOLITE STREET

## CONSTRUCTION PLANS FOR BITUMINOUS SURFACING, CURB & GUTTER, DRAINAGE IMPROVEMENTS, SANITARY SEWER, WATERMAIN AND MISCELLANEOUS CONSTRUCTION

## CITY OF RAMSEY



CITY OF RAMSEY,
ANOKA COUNTY,
MINNESOTA

## GOVERNING SPECIFICATIONS

THE 2016 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE 2013 CEAM STANDARD SPECIFICATIONS SHALL APPLY.

ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE LATEST EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

ALL REQUIREMENTS OF THE PROJECT MANUAL FOR THE YOLITE STREET PROJECT.

## SHEET INDEX

**THIS PLAN CONTAINS 22 SHEETS**



APPROVED: _____ DATE: _____

BRUCE WESTBY, P.E.
CITY ENGINEER

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

_____ 23461 DATE 5/4/17

CRAIG J. JOCHUM, P.E.
HAKANSON ANDERSON
DESIGN ENGINEER

LIC. NO.

| DATE | REVISION |
|---|---|
| | |

SHEET 1 OF 21 SHEETS

4163.01


Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763–427–5860 FAX 763–427–0520


THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38–2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

May 04, 2017 – 1:46pm
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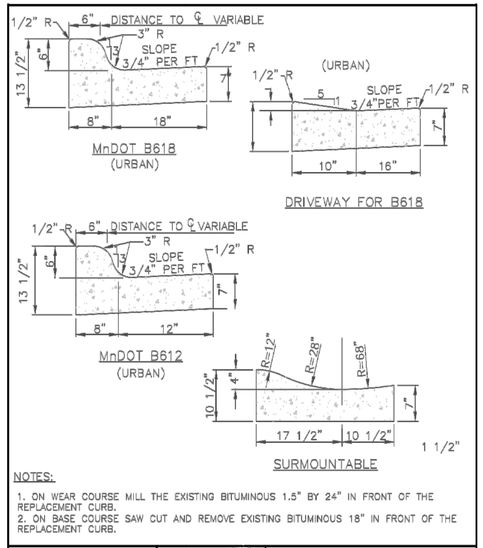
GENERAL CONSTRUCTION AND SOILS NOTES:

1. STRIP ALL INPLACE TOPSOIL IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. IN AREAS OF PARKING LOT AND BUILDING CONSTRUCTION, THE EXPOSED SAND SHALL BE SURFACE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY, ASTM D698, IN AT LEAST THE UPPER 3 FEET.
2. UNLESS OTHERWISE RECOMMENDED IN THESE PLANS, THE GRADING SUBGRADE SHALL BE CONSTRUCTED OF SUITABLE GRADING MATERIAL. THE FILL SHALL BE PLACED IN 8'' TO 10'' LOOSE LIFTS, AND COMPACTED TO 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY.
3. SUITABLE GRADING MATERIAL FOR THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, SILT, DEBRIS, ORGANIC MATERIAL AND OTHER UNSTABLE MATERIAL.
4. PROVIDE A SAW CUT WHEN PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT AND AT TERMINI OF CONSTRUCTION TO ENSURE A UNIFORM JOINT.
5. BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH Mn/DOT SPEC. 2104.3.
6. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.05 GAL/SY TO 0.07 GAL/SY BETWEEN BITUMINOUS LAYERS. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY) OR MC AND RC LIQUID ASPHALTS.
7. PERFORMANCE GRADED (PG) ASPHALT BINDER PG 58-28, SPEC. 3151, SHALL BE USED FOR ALL BITUMINOUS MIXES ON THIS PROJECT. SPECIFIC PG GRADES SHALL BE LISTED AT THE END OF THE MIX DESIGNATION NUMBER SHOWN ON THE TYPICAL SECTION.
8. THE BITUMINOUS MIXTURES SHALL MEET THE REQUIREMENTS OF SPECIFICATIONS 2360 AND 3139.
9. ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" OF TOPSOIL AND SOD. SEE CITY STANDARD PLATE ERO-6 ON SHEET 6 FOR TOPSOIL REQUIREMENTS.

GENERAL EROSION CONTROL NOTES:

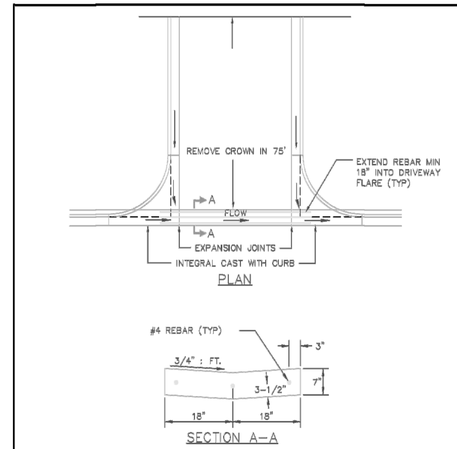
1. EROSION CONTROL SHALL CONFORM TO THE Mn/DOT EROSION CONTROL HANDBOOK.
2. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ACQUIRE THE NECESSARY MPCA NPDES STORMWATER PERMIT.
3. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL FACILITIES (BMP'S) PRIOR TO GRADING AND REMOVAL ACTIVITIES. BMP'S SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES AND POTENTIAL FOR EROSION HAS PASSED.
4. THE CONTRACTOR SHALL SCHEDULE HIS OPERATION TO MINIMIZE THE AMOUNT OF DISTURBED AREA AT ANY GIVEN TIME.
5. BMP'S SHALL BE INSPECTED DAILY BY THE CONTRACTOR. OBSERVATIONS SHALL BE RECORDED IN THE INSPECTION LOG.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION.
7. THE CONTRACTOR SHALL FILE A NOTICE OF TERMINATION WITH THE MPCA AFTER FINAL STABILIZATION HAS BEEN APPROVED.




NOTES:

1. ON WEAR COURSE MILL THE EXISTING BITUMINOUS 1.5" BY 24" IN FRONT OF THE REPLACEMENT CURB.
2. ON BASE COURSE SAW CUT AND REMOVE EXISTING BITUMINOUS 18" IN FRONT OF THE REPLACEMENT CURB.

| APPROVED: 1 - 2016 | City of RAMSEY | STANDARD DETAILS: CURB AND GUTTER |
|---|---|---|
| | | CITY PLATE No. STR-1 |

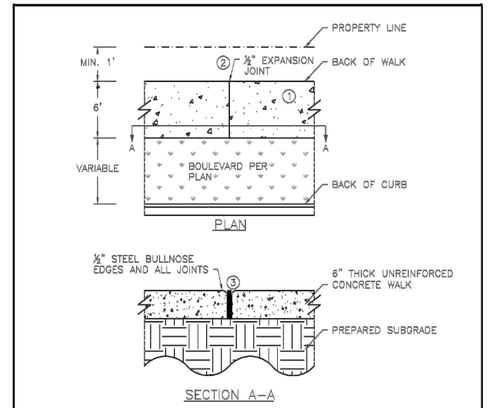



CONCRETE VALLEY GUTTER

NOTES:

1. WITH REMOVAL OF EXISTING CURB AT A STREET, MILL BITUMINOUS TO A DEPTH OF 1.5" ANS A WIDTH OF 18" IN EXISTING STREET.
2. TO BE USED WHENEVER CROSS DRAINAGE IS < 2%

| APPROVED: 4 - 2007 | City of RAMSEY | STANDARD DETAILS: CROSS GUTTER |
|---|---|---|
| | | CITY PLATE No. STR-2 |



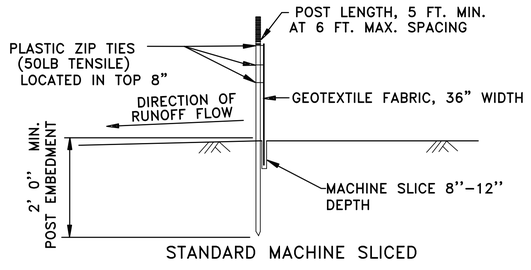

NOTE:

1. BROOM FINISH CONCRETE WALK SURFACE
2. MAXIMUM 100 FOOT SPACING BETWEEN EXPANSION JOINTS
3. 1/2" EXPANION JOINT MEETING MNDOT SPEC 3702. PROVIDE ONE PIECE OF FILLER FOR THE ENTIRE DEPTH AND WIDTH OF THE JOINT

NOT TO SCALE

| APPROVED: 10 - 2015 | City of RAMSEY | STANDARD DETAILS: CONCRETE SIDEWALK |
|---|---|---|
| | | CITY PLATE No. STR-3 |

| BASIS OF ESTIMATED QUANTITIES | |
|---|---|
| Bituminous Pavement | 110lbs/yd$^2$/in |
| Bituminous Material for Tack Coat | 0.07 Gal/yd$^2$ |
| Seed Mixture 25-121 | 120 lbs/acre |
| Seed Mixture 25-151 | 120 lbs/acre |
| Type Hydraulic Mulch | 2100 lbs/acre |
| Fertilizer Type 3 22-5-10 | 300 lbs/acre |




1/2 SILT FENCE DETAILS

TO PROTECT AREAS FROM SHEET FLOW (SEE SPEC. 3886)

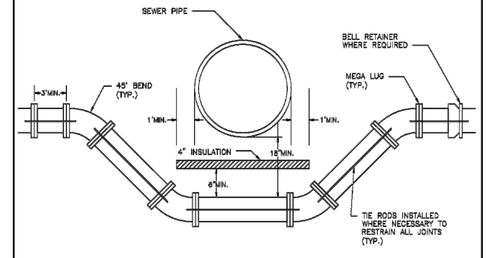
MNDOT 2016 SPEC

| MNDOT 2016 SPEC TABLE 3877-1 COMMON TOPSOIL BORROW | | |
|---|---|---|
| REQUIREMENT | RANGE | TEST METHOD |
| MATERIAL PASSING THE 3/4 IN [19MM] | 100% | ASTM D 422 |
| MATERIAL PASSING NO. 4 [4.75MM] | >85% | - |
| CLAY | 5% -35% | ASTM D 422 |
| SILT | 5% - 70% | ASTM D 422 |
| SAND | 10% - 75% | ASTM D 422 |
| ORGANIC MATTER | 3% - 15% | ASTM D 2974 |
| pH | 6.1-7.8 | ASTM G 51 |

NOTE:

1. INSTALLATION OF 4" OF TOPSOIL MEETING MNDOT SPECIFICATION 3877A COMMON TOPSOIL BORROW, MAY BE REQUIRED ACROSS ALL DISTURBED AREAS.
2. A SOIL CERTIFICATION FROM A GEOTECHNICAL FIRM MUST BE PROVIDED VERIFYING THE TOPSOIL MEETS SPECIFICATION ALONG WITH LOAD TICKETS TO VERIFY THE SOURCE OF MATERIAL AND QUANTITY.
3. TOPSOIL MUST COME FROM A CITY APPROVED SOURCE.

| APPROVED: 1 - 2016 | City of RAMSEY | CITY PLATE No. ERO-6 | STANDARD DETAILS: TOPSOIL REQUIREMENTS |
|---|---|---|---|




NOTE:

1. PROVIDE MEGA LUGS OR APPROVED EQUAL AT ALL JOINT'S ON BENDS AND AS SHOWN ON THIS STANDARD PLATE.
2. USE 2 - 3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION.
3. PROVIDE SAND CUSHION BETWEEN TOP OF WATERMAIN AND BOTTOM OF INSULATION, MIN. DIMENSIONS AS SHOWN ON THIS STANDARD PLATE.

NOTE: SEE STANDARD PLATE WAT-5 FOR UTILITY INSULATION REQUIREMENTS.

| APPROVED: 6 - 2015 | City of RAMSEY | STANDARD DETAILS: WATERMAIN LOWERING |
|---|---|---|
| | | CITY PLATE No. WAT-7 |

| DATE | REVISION |
|---|---|
| | |

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date 5-4-17 CRAIG J. JOCHUM, P.E. Lic. No. 23461

DESIGNED BY: CJJ
DRAWN BY: MSS
CHECKED BY: CJJ

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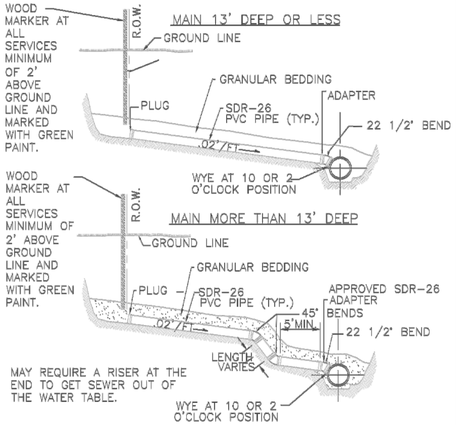
YOLITE STREET

GENERAL CONSTRUCTION NOTES AND DETAILS
CITY OF RAMSEY, MINNESOTA

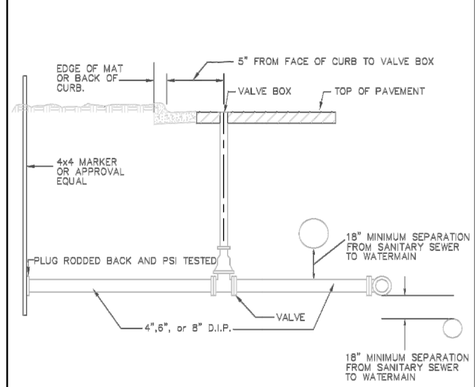
SHEET 2 OF 21 SHEETS

4163.01



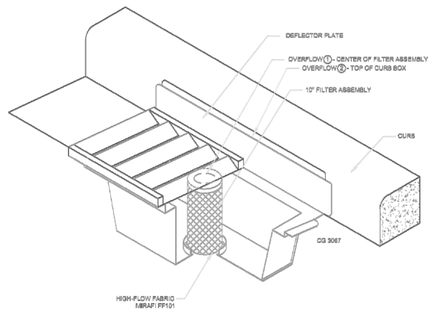

NOTES:
1. 10 GAGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL SEWER LINES
2. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE.
3. TRACER WIRE ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS.

| APPROVED: | | STANDARD DETAILS: |
|---|---|---|
| 4 – 2016 | City of RAMSEY | SANITARY SEWER SERVICE |
| | CITY PLATE No. | SEW-3 |




NOTES:
1.SHALL BE BLOCKED OR TIED TO THE MAIN WITH 2-3/4" DIAMETER TIE RODS. ALL TIE RODS TO BE COAL TAR COATED AFTER INSTALLATION. RESTRAINED JOINT PIPE AND RETAINING GLANDS MAY BE USED.

| APPROVED: | | STANDARD DETAILS: |
|---|---|---|
| 1 – 2016 | City of RAMSEY | COMMERCIAL SERVICE |
| | CITY PLATE No. | WAT-5 |

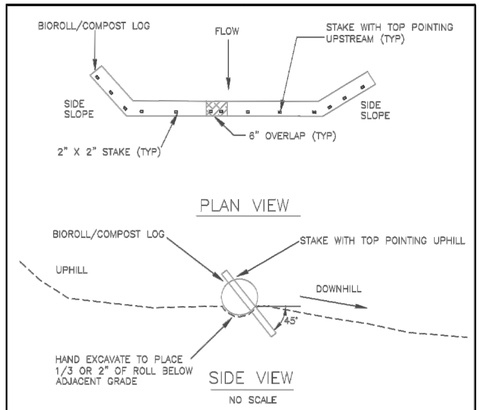



INLET PROTECTION – WIMCO OR EQUAL

N.T.S.

NOTE:
THIS INLET PROTECTION SHALL BE USED IMMEDIATELY FOLLOWING CURB & GUTTER CONSTRUCTION. INLET PROTECTION SHALL REMAIN INSTALLED AND MAINTAINED UNTIL ALL HOME CONSTRUCTION IS COMPLETE.

| APPROVED: | | STANDARD DETAILS: |
|---|---|---|
| 1 – 2016 | City of RAMSEY | INLET PROTECTION |
| | CITY PLATE No. | ERO-2 |

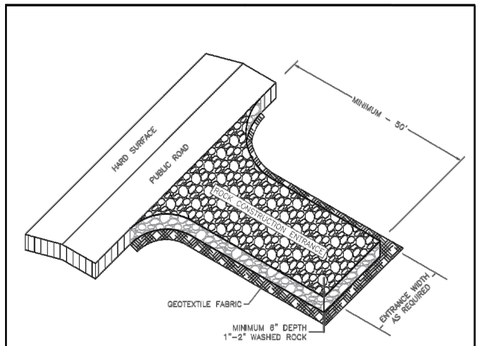



NOTE:
STAKE INTO GROUND WITH WOOD STAKES DRIVING STAKE 8" INTO GROUND AND PROTRUDING 2" ABOVE LOG
WOOD STAKES ARE A MINIMUM 0.5" X 2" X 16" AND PLACED EVERY 1' UNLESS PRECLUDED BY A ROCK
WHEN MORE THAN 1 BIOROLL/COMPOST LOG IS NEEDED, OVERLAP ENDS A MINIMUM OF 8" AND STAKE
WOOD STAKES ARE DRIVEN THROUGH BACK HALF OF BIOROLL OR COMPOST LOG AT 45° ANGLE WITH TOP OF STAKE POINTING UPHILL

| APPROVED: | | STANDARD DETAILS: |
|---|---|---|
| 3 – 2016 | City of RAMSEY | BIO ROLL (COMPOST LOG) |
| | CITY PLATE No. | ERO-4 |

## CONSTRUCTION PLAN LEGEND

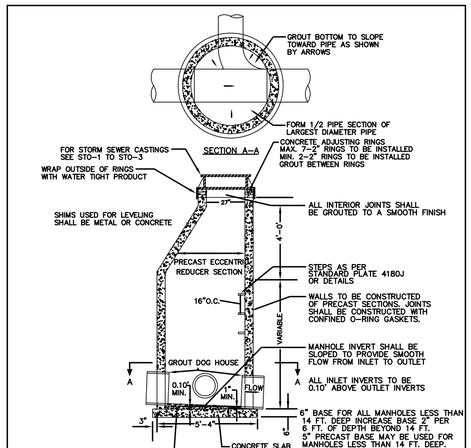
- EXISTING FENCE
- SALVAGE FENCE
- INSTALL SALVAGED FENCE
- EXISTING GRAVEL EDGE
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- PROPOSED CENTERLINE
- 800 EXISTING CONTOUR
- 800 PROPOSED CONTOUR
- 877.0 SPOT ELEVATION
- DRAINAGE ARROW
- PROPERTY BOUNDARY
- EXISTING WATERMAIN
- PROPOSED WATERMAIN
- EXISTING SANITARY
- PROPOSED SANITARY
- SAWCUT CONCRETE PAVEMENT (FULL DEPTH)
- SAWCUT BITUMINOUS (FULL DEPTH)
- EXISTING TREE LINE
- CLEAR AND GRUB TREES
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- P-OH OVERHEAD POWER
- G GAS LINE
- T-BUR BURIED TELEPHONE LINE
- P-BUR BURIED ELECTRIC LINE
- FO-BUR BURIED FIBER OPTIC
- E EXISTING ELECTRIC PEDESTAL
- EXISTING CATCH BASIN
- PROPOSED CATCH BASIN
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- EXISTING HYDRANT
- PROPOSED HYDRANT
- GV EXISTING GATE VALVE
- GV PROPOSED GATE VALVE
- S EXISTING SANITARY MANHOLE
- EXISTING CONCRETE
- PROPOSED CONCRETE
- EXISTING GRAVEL




NOTE:
1. MINIMUM CONSTRUCTION ENTRANCE WIDTH EQUAL TO PROPOSED ROADWAY WIDTH.
2. WIDTH OF RADIUS AS REQUIRED TO ENSURE VEHICLES DO NOT TRACK ONTO PUBLIC ROAD.
3. MAINTAINENCE AS REQUIRED TO PREVENT TRACKING ONTO PUBLIC ROADS. THIS MAY REQUIRE TOP DRESSING WITH ADDITIONAL ROCK OR REMOVAL AND REINSTALLATION OF THE ENTRANCE AS NEEDED.

NOT TO SCALE

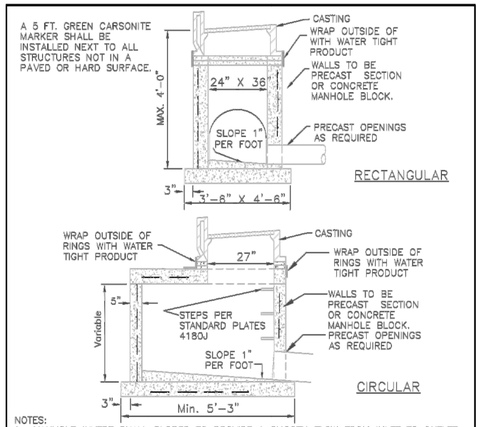
| APPROVED: | | STANDARD DETAILS: |
|---|---|---|
| 1 – 2016 | City of RAMSEY | ROCK CONSTRUCTION ENTRANCE |
| | CITY PLATE No. | ERO-5 |




STANDARD DETAIL

NOTES:
1. A 10 GAGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL SEWER LINES
2. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE.
3. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS

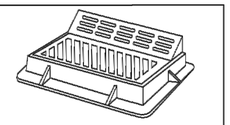
| APPROVED | | STANDARD DETAILS |
|---|---|---|
| DATE 1-2006 | City of RAMSEY | STORM MANHOLE / CATCH BASIN |
| | CITY PLATE No. | STO-4 |

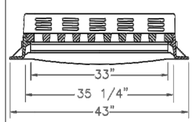


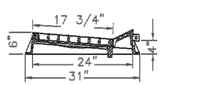

NOTES:
1. MANHOLE INVERT SHALL SLOPED TO PROVIDE A SMOOTH FLOW FROM INLET TO OUTLET
2. CONCRETE BASE SHALL BE 6" POURED IN PLACE OR 5" PRECAST SLAB.
3. CONCRETE ADJUSTING RINGS TO BE INSTALLED MAX.7-2" RINGS, MIN 2-2" RINGS
4. GROUT BETWEEN RINGS,SHIMS SHALL BE METAL, CONCRETE OR PLASTIC
5. INSPECTION OF MANHOLE REQUIRED BEFORE BACKFILLING
6. A 10 GAUGE SOLID COPPER TRACER WIRE IS REQUIRED WITH ALL STORM LINES.
7. CONDUCTIVITY IS REQUIRED ON ALL TRACER WIRE
8. STEPS ARE REQUIRED IF STRUCTURE FROM THE CASTING TO THE INVERT IS GREATER THAN 4 FEET
9. TRACER WIRES ARE TO END IN STRUCTURES, AT FINISHED GRADE ON ALL SERVICES AND STUBS

| APPROVED: | | STANDARD DETAILS: |
|---|---|---|
| 4 – 2007 | City of RAMSEY | CATCH BASIN |
| | CITY PLATE No. | STO-1 |

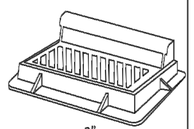
NOTE:
1. CATCH BASIN CASTING SHALL BE NEENAH R-3067 WITH GRATED BACK (BICYLE SAFE) OR APPROVED EQUAL.
2. FOR CATCH BASINS ADJACENT TO RADIUS, USE NEENAH R-3246R OR APPOVED EQUAL.

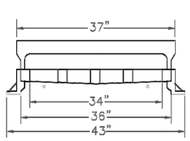


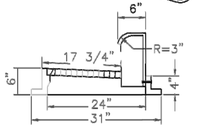



NOTE:
1. CATCH BASIN CASTING SHALL BE NEENAH R-3246R OR APPROVED EQUAL






STANDARD CATCHBASIN CASTING

| APPROVED: | | STANDARD DETAILS: |
|---|---|---|
| 6 – 2016 | City of RAMSEY | STORMWATER CASTING |
| | CITY PLATE No. | STO-4 |

| DATE | REVISION |
|---|---|
| | |

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 5-4-17 Lic. No. 23461

DESIGNED BY: CJJ
DRAWN BY: MSS
CHECKED BY: CJJ

Hakanson Anderson
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www.hakanson-anderson.com

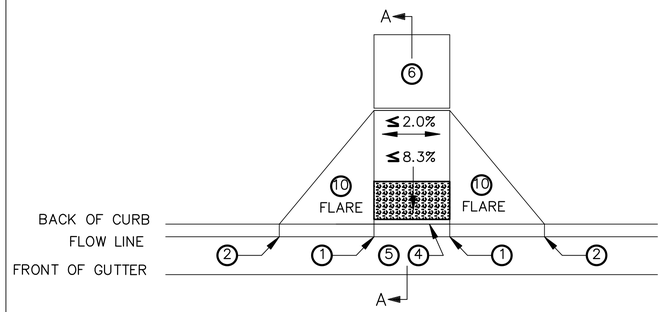
YOLITE STREET

DETAILS & LEGEND

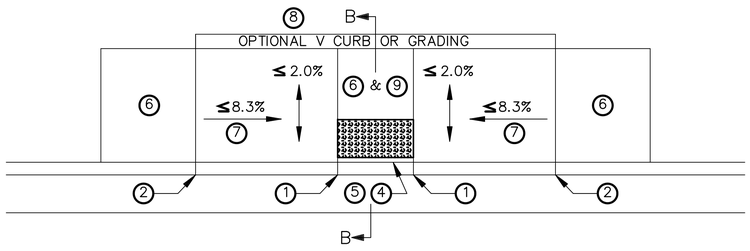
CITY OF RAMSEY, MINNESOTA

SHEET 3 OF 21 SHEETS

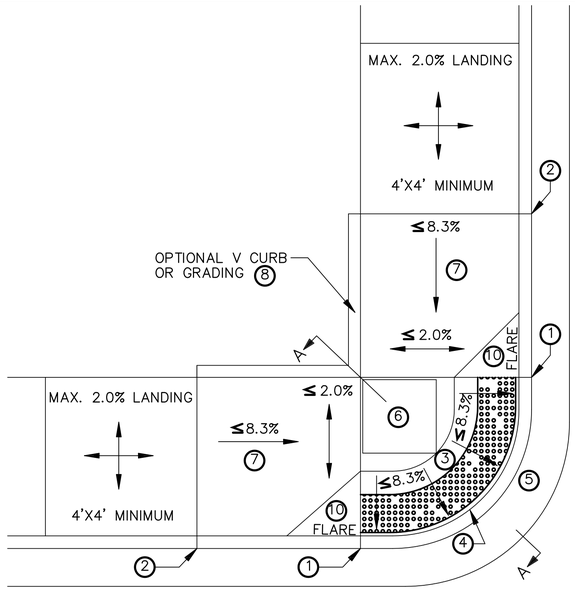
4163.01



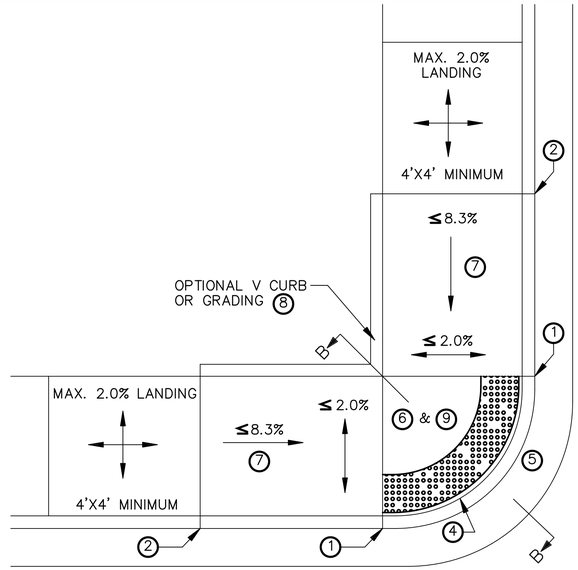

PERPENDICULAR



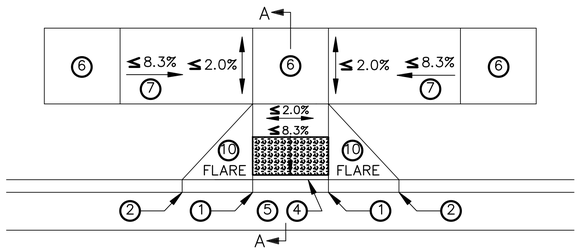

PARALLEL



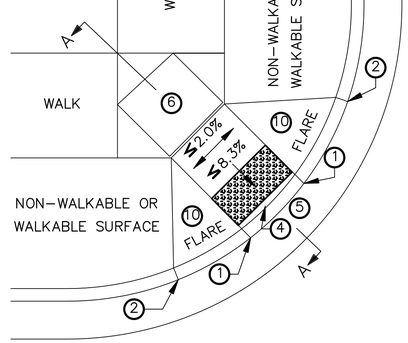

FAN



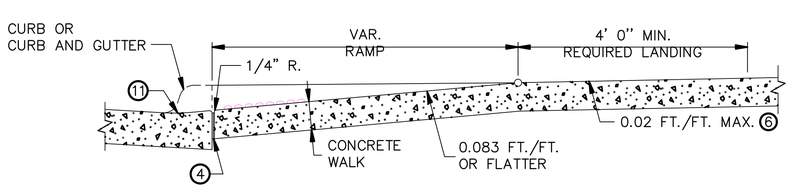

DEPRESSED CORNER




TIERED PERPENDICULAR

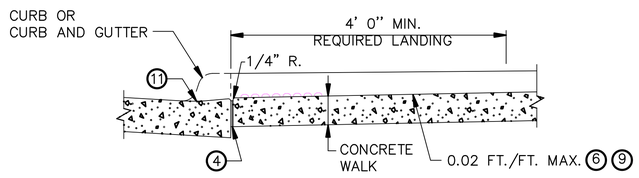



DIAGONAL (12)




SECTION A–A

PERPENDICULAR/TIERED/DIAGONAL/FAN




SECTION B–B

PARALLEL/DEPRESSED CORNER

NOTES:

SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR DETAILS ON DETECTABLE WARNING.

SLOPES ARE DEFINED AS ABSOLUTE ELEVATION DIFFERENCE PER LENGTH OF RUN. (AS OPPOSED TO A RELATIVE SLOPE WITH RESPECT TO A CURB LINE OR CURB HEIGHT.)

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AND AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS 5% OR GREATER.

CONTRACTION JOINTS SHALL BE CONSTRUCTED AT ALL GRADE BREAKS.

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

USE 6" CONCRETE FOR ALL INITIAL RAMP AND LANDING AREAS.

CONTRACTOR SHALL EMPLOY APPROPRIATE METHODS FOR INTERMEDIATE GRADE CONTROL TO ENSURE ALL GRADE BREAKS ARE CONSTRUCTED PROPERLY.

ALL GRADE BREAKS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL/PEDESTRIAN ACCESS ROUTE.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

(1) 0" CURB HEIGHT.

(2) FULL CURB HEIGHT.

(3) LESS THAN 5% PREFERRED. 5–8.3% SHOULD ONLY BE USED AFTER ALL OTHER SLOPES HAVE BEEN CONSIDERED AND DEEMED IMPRACTICAL.

(4) 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SET BACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SET BACK 3"–6" FROM THE BACK OF CURB.

(5) SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.

(6) 4' BY 4' MIN. LANDING WITH MAX. 2% SLOPE IN ALL DIRECTIONS.

(7) IF RUNNING SLOPE IS LESS THAN 5.0% NO SECONDARY LANDING IS REQUIRED.

(8) V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. SEE SHEET 5 OF 5.

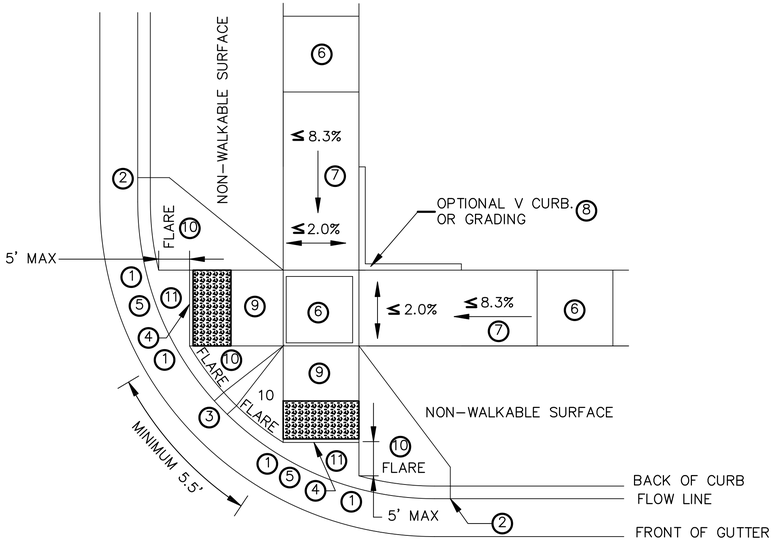
(9) DETECTABLE WARNINGS MAY BE PART OF 4' X 4' LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.

(10) SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.

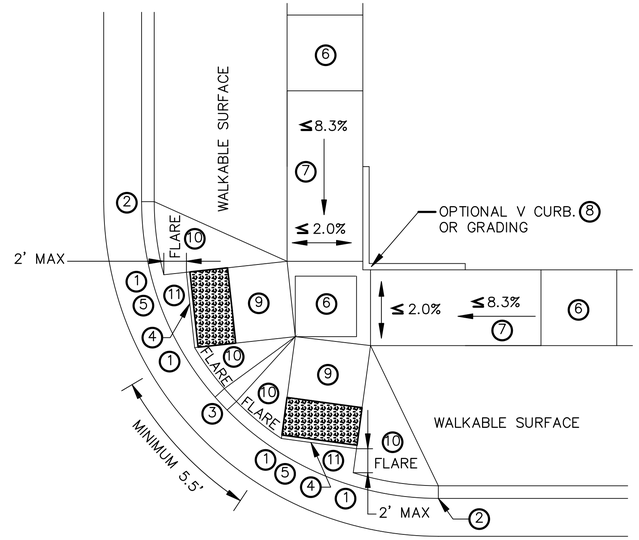
(11) SEE SHEET 3 OF 5 FOR FURTHER DETAIL.

(12) DIAGONAL RAMPS SHOULD ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN CONSIDERED AND DEEMED IMPRACTICAL.

| | |
|---|---|
| STANDARD PLAN SHEET NO. 5–297.250 (1 OF 5) | PEDESTRIAN CURB RAMP DETAILS |
| STANDARD APPROVED: MAY 10, 2012 | |
| YOLITE STREET, CITY OF RAMSEY | SHEET NO. 4 OF 21 SHEETS |

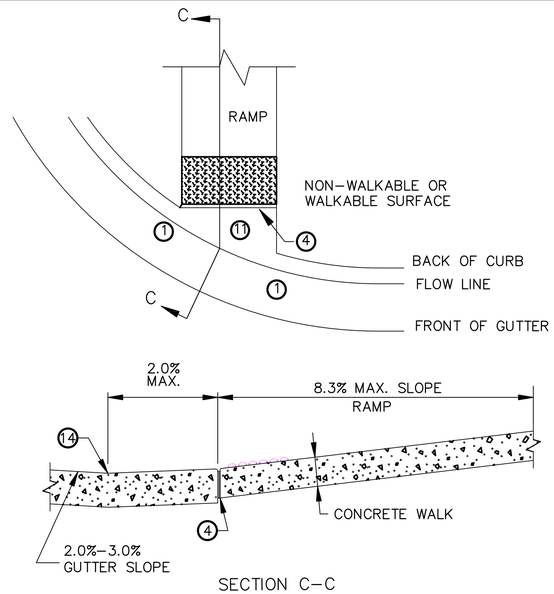



ADJACENT TO NON-WALKABLE SURFACE



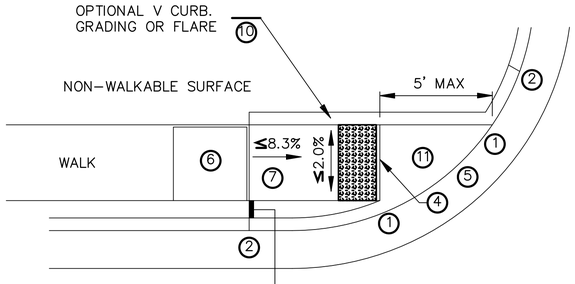

ADJACENT TO WALKABLE SURFACE

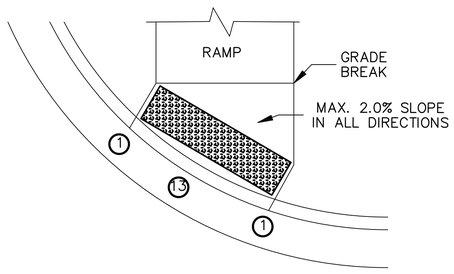
COMBINED DIRECTIONAL




SECTION C-C

CURB FOR DIRECTIONAL RAMPS (12)




ONE-WAY DIRECTIONAL

NOTES:

SEE STANDARD PLATE 7038 AND SHEET 4 OF 5 FOR DETAILS ON DETECTABLE WARNING.

SLOPES ARE DEFINED AS ABSOLUTE ELEVATION DIFFERENCE PER LENGTH OF RUN. (AS OPPOSED TO A RELATIVE SLOPE WITH RESPECT TO A CURB LINE OR CURB HEIGHT.)

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE CHANGES DIRECTION, AND AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5%.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS 5% OR GREATER.

CONTRACTION JOINTS SHALL BE CONSTRUCTED AT ALL GRADE BREAKS.

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

USE 6" CONCRETE WALK FOR ALL INITIAL RAMP AND LANDING AREAS.

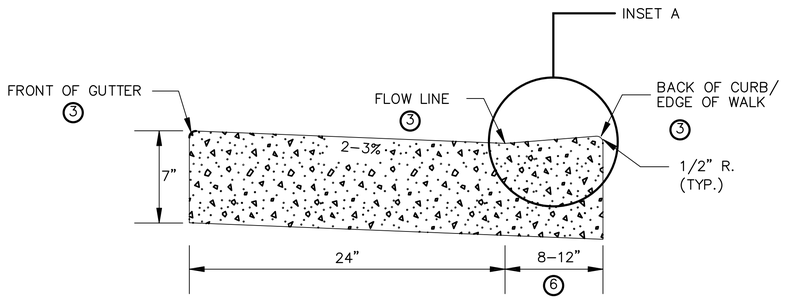
CONTRACTOR SHALL EMPLOY APPROPRIATE METHODS FOR INTERMEDIATE GRADE CONTROL TO ENSURE ALL GRADE BREAKS ARE CONSTRUCTED PROPERLY.

ALL GRADE BREAKS SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL/PEDESTRIAN ACCESS ROUTE.

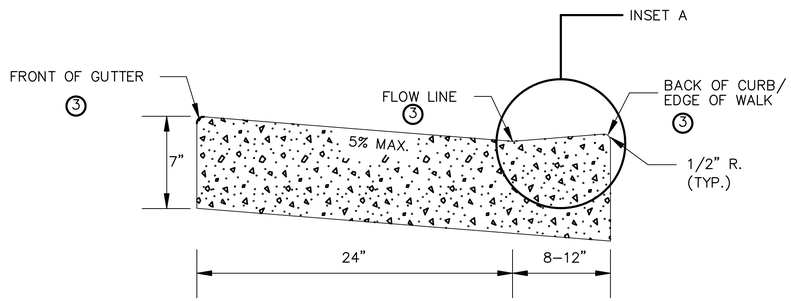
4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

(1) 0" CURB HEIGHT.
(2) FULL CURB HEIGHT.
(3) 3" MINIMUM CURB HEIGHT.
(4) 1/2" PREFORMED JOINT FILLER MATERIAL AASHTO M 213. JOINT FILLER SHALL BE PLACED FLUSH WITH THE BACK OF CURB AND ADJACENT SIDEWALK. JOINT SHALL BE FREE OF DEBRIS. RECTANGULAR DETECTABLE WARNINGS SHALL BE SET BACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SET BACK 3"-6" FROM THE BACK OF CURB.
(5) SEE PEDESTRIAN ACCESS ROUTE CURB AND GUTTER DETAIL FOR INFORMATION ON CONSTRUCTING CURB AND GUTTER AT CURB OPENINGS. SEE SHEET NO. 3 OF 5.
(6) 4' BY 4' MIN. LANDING WITH MAX. 2% SLOPE IN ALL DIRECTIONS.
(7) IF RAMP SLOPE IS LESS THAN 5% NO SECONDARY LANDING IS REQUIRED.
(8) V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
(9) RUNNING SLOPE LESS THAN OR EQUAL TO 8.3% & CROSS SLOPE LESS THAN OR EQUAL TO 2%.
(10) SEE SHEET 4 OF 5, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
(11) MAX. 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
(12) TO BE USED FOR ALL DIRECTIONAL RAMPS.
(13) DOMES PLACED AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
(14) ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY NOT BE GREATER THAN 1/4 INCH.

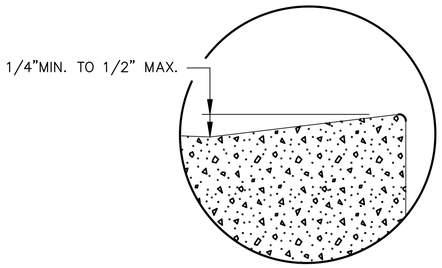
| | |
|---|---|
| STANDARD PLAN SHEET NO. 5-297.250 (2 OF 5) | PEDESTRIAN CURB RAMP DETAILS |
| STANDARD APPROVED: MAY 10, 2012 | |




NON PERPENDICULAR ①

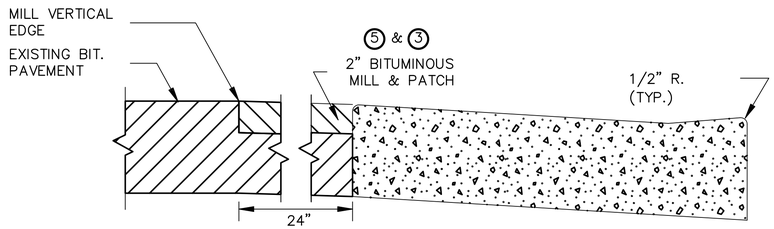


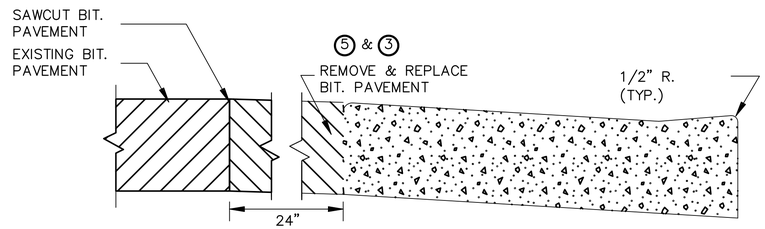

PERPENDICULAR ②

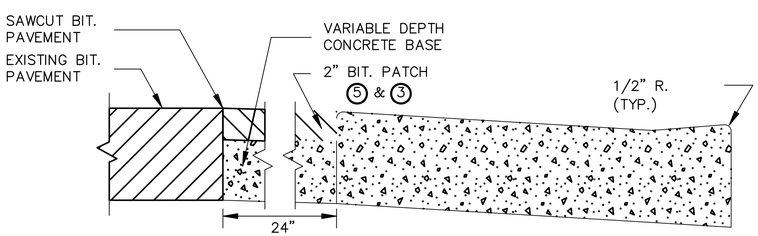


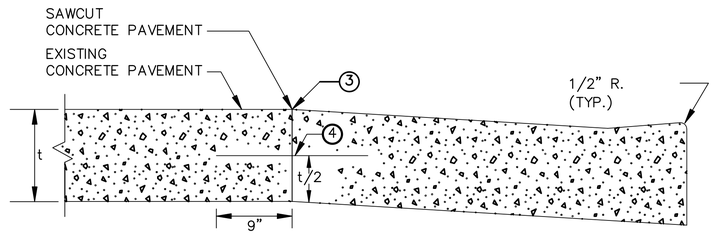

INSET A

## PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL




## PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER

FOR USE ON CURB RAMP RETROFITS

NOTES:

ADEQUATE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% ABSOLUTE MAXIMUM.

NO PONDING SHALL BE PRESENT IN THE PAR.

ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE MAY NOT BE GREATER THAN 1/4 INCH.

① FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS, DEPRESSED CORNERS, & ONE WAY AND COMBINED DIRECTIONALS.

② FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.

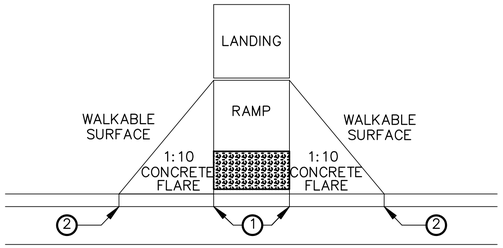
③ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".

④ DRILL AND GROUT NO. 13 EPOXY–COATED 18" LONG BARS AT 2' CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT.

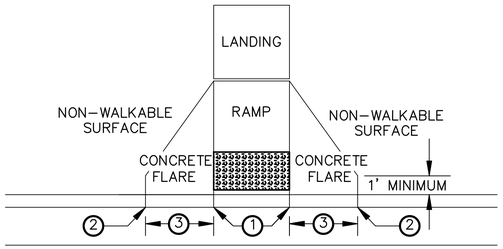
⑤ ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.

⑥ VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS.

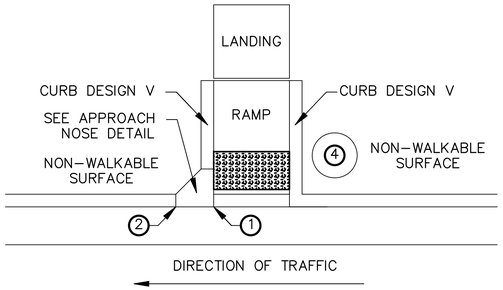
| | |
|---|---|
| STANDARD PLAN SHEET NO. 5–297.250 (3 OF 5) | PEDESTRIAN CURB RAMP DETAILS |
| STANDARD APPROVED: MAY 10, 2012 | |
| YOLITE STREET, CITY OF RAMSEY | SHEET NO. 6 OF 21 SHEETS |



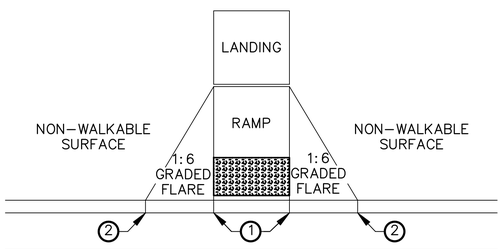

PAVED FLARES
ADJACENT TO WALKABLE SURFACE




PAVED FLARES
ADJACENT TO NON–WALKABLE SURFACE

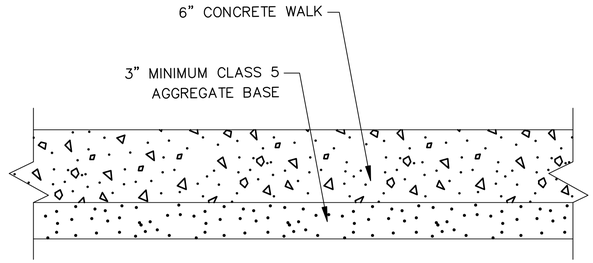



RETURNED CURB

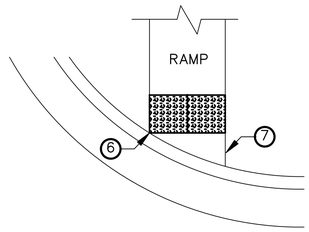



GRADED FLARES

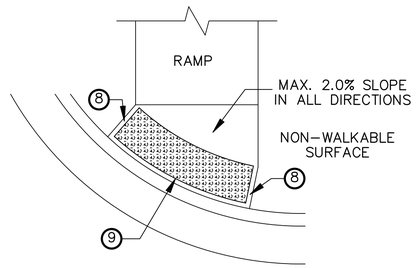
TYPICAL SIDE TREATMENT OPTIONS ⑤




TYPICAL SIDEWALK SECTION
WITHIN INTERSECTION CORNER

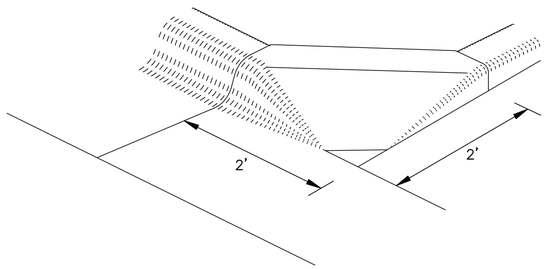


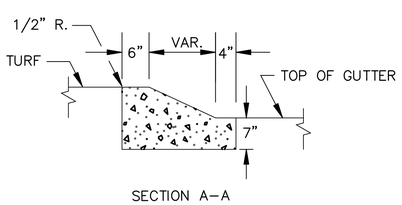

DETECTABLE WARNING
SETBACK CRITERIA



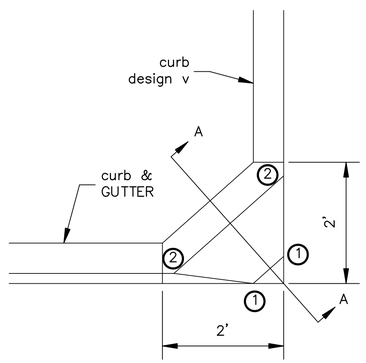

RADIAL DETECTABLE
WARNING AT RADIUS

DETECTABLE WARNING PLACEMENT




SECTION A–A




APPROACH NOSE DETAIL
FOR DOWNSTREAM SIDE OF TRAFFIC

NOTES:

SEE STANDARD PLATE 7038 AND THIS SHEET FOR DETAILS ON DETECTABLE WARNING.

USE 6" CONCRETE WALK UP TO EXISTING SIDEWALK GRADES FOR ALL RAMP AND LANDING AREAS.

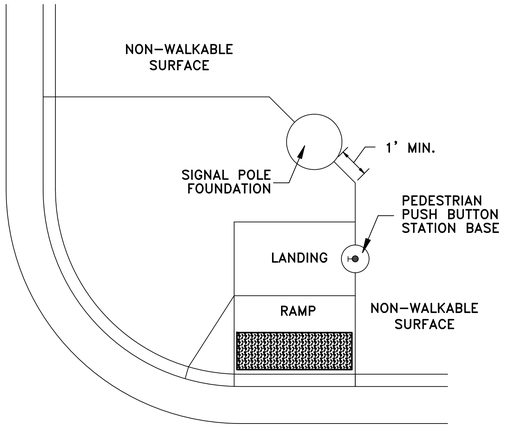
WHETHER A SURFACE IS WALKABLE OR NOT SHALL BE DETERMINED BY THE ENGINEER.

FLARE LENGTHS SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

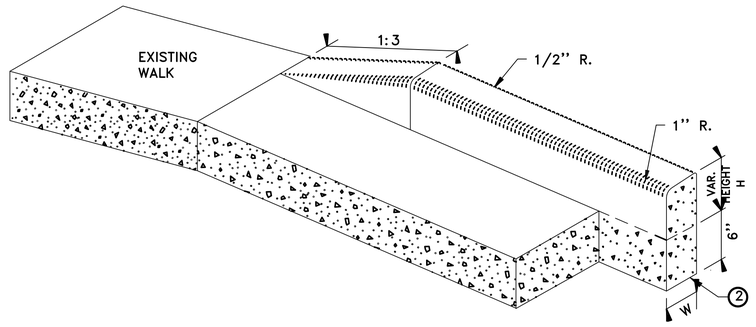
4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. SHARED USE PATHS SHALL HAVE DETECTABLE WARNING ACROSS THE ENTIRE WIDTH OF PATH WHEN THE PATH CROSSES A ROAD.

① 0" CURB HEIGHT.
② FULL CURB HEIGHT.
③ 2' – 3' CONCRETE FLARE.
④ IMMOVABLE OBJECT OR OBSTRUCTION.
⑤ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED ON ALL RAMPS AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
⑥ DETECTABLE WARNING SHALL HAVE ONE CORNER 3" FROM THE BACK OF CURB.
⑦ SHALL BE 2' MAXIMUM OFFSET WHEN ADJACENT TO WALKABLE SURFACE AND 5' MAXIMUM OFFSET WHEN ADJACENT TO NON–WALKABLE SURFACE.
⑧ WHEN NO FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
⑨ DETECTABLE WARNING TO BE PLACED AT A UNIFORM OFFSET DISTANCE FROM 3" TO 6" FROM THE BACK OF CURB. IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNING SHALL BE PLACED 1' FROM THE EDGE OF ROADWAY TO PROVIDE CONCRETE BORDER.

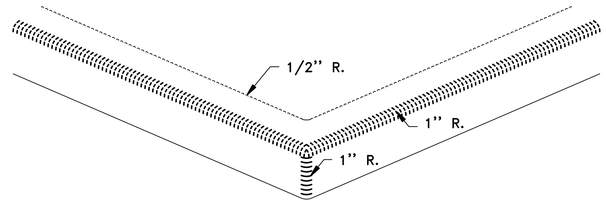
| | |
|---|---|
| STANDARD PLAN SHEET NO. 5–297.250 (4 OF 5) | PEDESTRIAN CURB RAMP DETAILS |
| STANDARD APPROVED: MAY 10, 2012 | |
| YOLITE STREET, CITY OF RAMSEY | SHEET NO. 7 OF 21 SHEETS |




CONCRETE WALK EDGES ADJACENT TO CONCRETE STRUCTURES

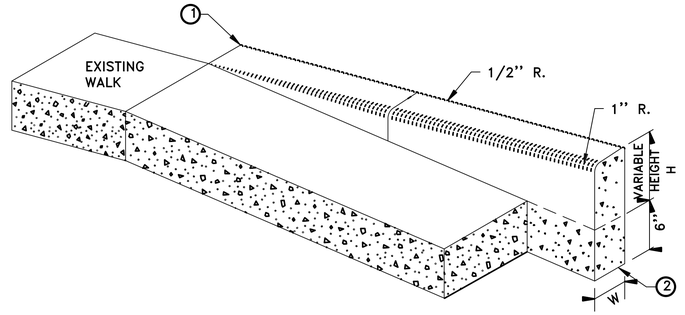



V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS

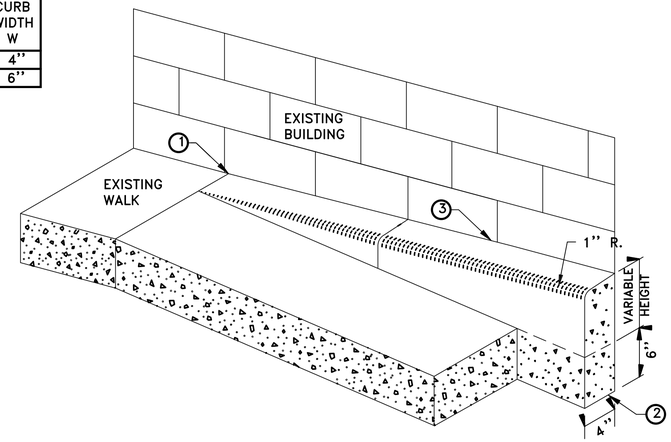



V CURB INTERSECTION

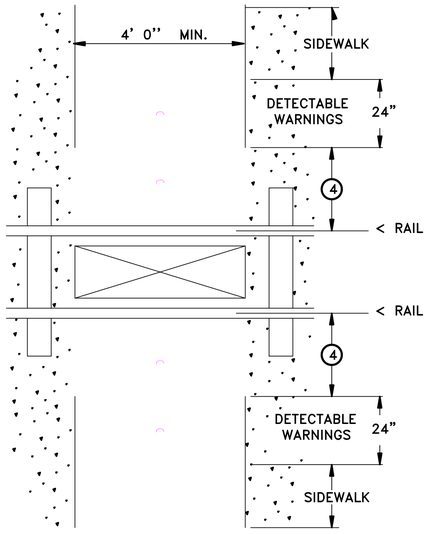
| CONCRETE CURB DESIGN V | |
|---|---|
| CURB HEIGHT H | CURB WIDTH W |
| < 6" | 4" |
| ≥ 6" | 6" |



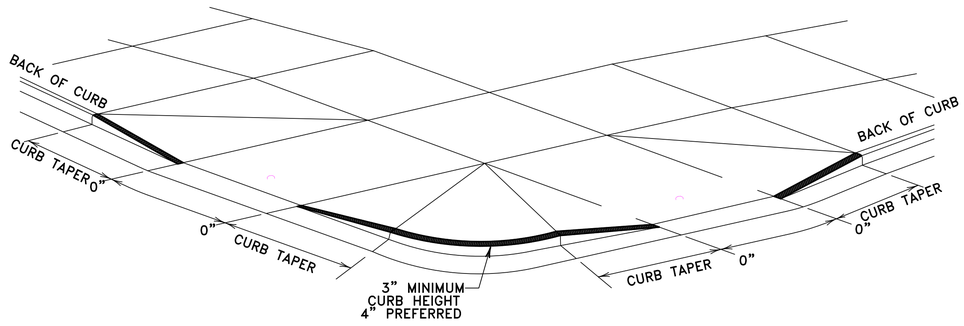

V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS




V CURB ADJACENT TO BUILDING




RAILROAD CROSSING
PLAN VIEW




DETECTABLE EDGE AT QUADRANT ⑤

NOTES:

ALL V–CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.

V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.

V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.

① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.

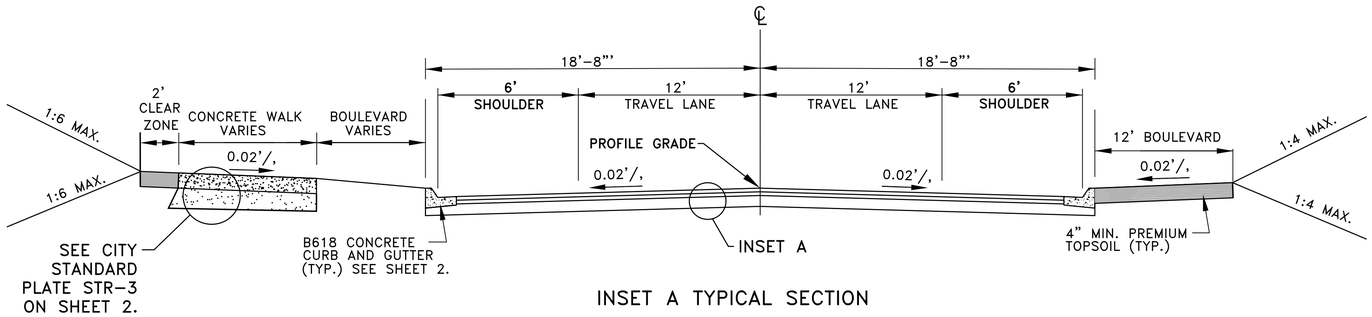
② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.

③ EDGE BETWEEN NEW V CURB AND INPLACE STRUCTURE SHALL BE SEALED AND BOND BREAKER SHALL BE USED BETWEEN EXISTING STRUCTURE AND PLACED V–CURB.

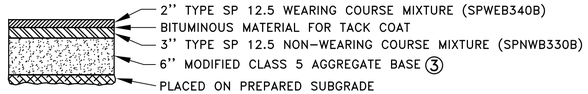
④ EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 6' MINIMUM TO 15' MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL.

⑤ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES TRUNCATED DOMES WHEREVER THERE IS ZERO–INCH HIGH CURB. CURB TRANSITIONS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS IMMEDIATELY AT THE EDGE OF THE TRUNCATED DOMES AND UNIFORMLY RISES TO A 3–INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TRANSITION AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILTY GUIDELINES.

| | |
|---|---|
| STANDARD PLAN SHEET NO. 5–297.250 (5 OF 5) | PEDESTRIAN CURB RAMP DETAILS |
| STANDARD APPROVED: MAY 10, 2012 | |
| YOLITE STREET, CITY OF RAMSEY | SHEET NO. 8 OF 21 SHEETS |




INSET A TYPICAL SECTION




1/9 TYPICAL SECTION – YOLITE STREET ①②

N.T.S.

| TABLE A<br>MODIFIED CLASS 5<br>SPECIFICATIONS | |
|---|---|
| | % PASSING |
| 1" | 100 |
| 3/4" | 90 – 100 |
| 3/8" | 50 – 80 |
| No.4 | 35 – 70 |
| No.10 | 20 – 60 |
| No.40 | 10 – 35 |
| No.200 | 5 – 10 |

2/9 MODIFIED CLASS 5 SPECIFICATIONS

N.T.S.

REFERENCE NOTES:

① SEE SHEET 10 FOR TYPICAL FILL AND EXCAVATION SECTIONS.

② CONTRACTOR SHALL SCARIFY AND COMPACT, ACCORDING TO THE SPECIFIED DENSITY METHOD, THE TOP 12 INCHES OF MATERIAL PRIOR TO PLACING ANY FILL MATERIALS OR CLASS 5 AGGREGATE BASE.

③ SEE 2/15 .

| DATE | REVISION |
|---|---|
| | |

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Date 5-4-17 CRAIG J. JOCHUM, P.E. Lic. No. 23461

DESIGNED BY: CJJ
DRAWN BY: MSS
CHECKED BY: CJJ

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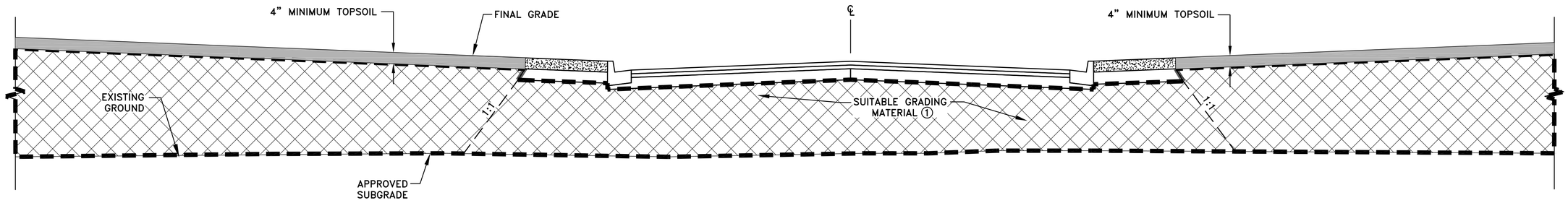
YOLITE STREET

TYPICAL SECTIONS

CITY OF RAMSEY, MINNESOTA

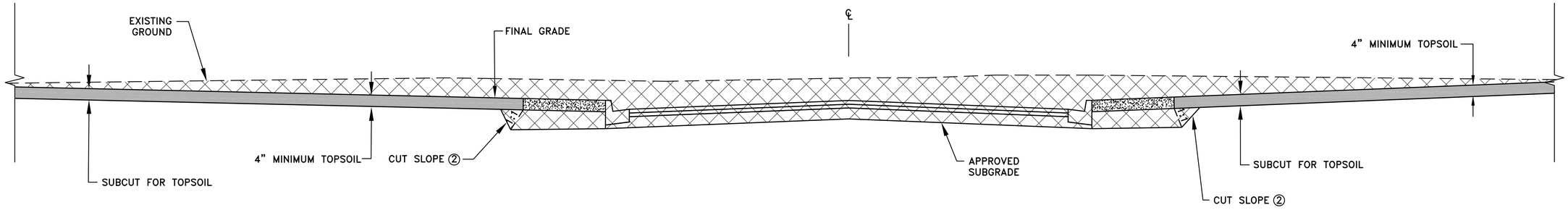
SHEET 9 OF 21 SHEETS

4163.01




1/10 TYPICAL FILL SECTION (EMBANKMENT)

N.T.S.




2/10 TYPICAL EXCAVATION SECTION

N.T.S.

REFERENCE NOTES:

① SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, SILTS, DEBRIS, ORGANIC MATERIAL, AND OTHER UNSTABLE MATERIAL.

② CONTRACTOR SHALL PROVIDE A SAFE CUT SLOPE PER OSHA REQUIREMENTS.

③ ALL DISTURBED AREAS REQUIRE A MINIMUM OF 4 INCHES OF TOPSOIL. SEE CITY STANDARD PLATE ERO-6 ON SHEET 2.

LEGEND

TOPSOIL ③

COMMON EXCAVATION

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|---|---|
| | |

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YOLITE STREET

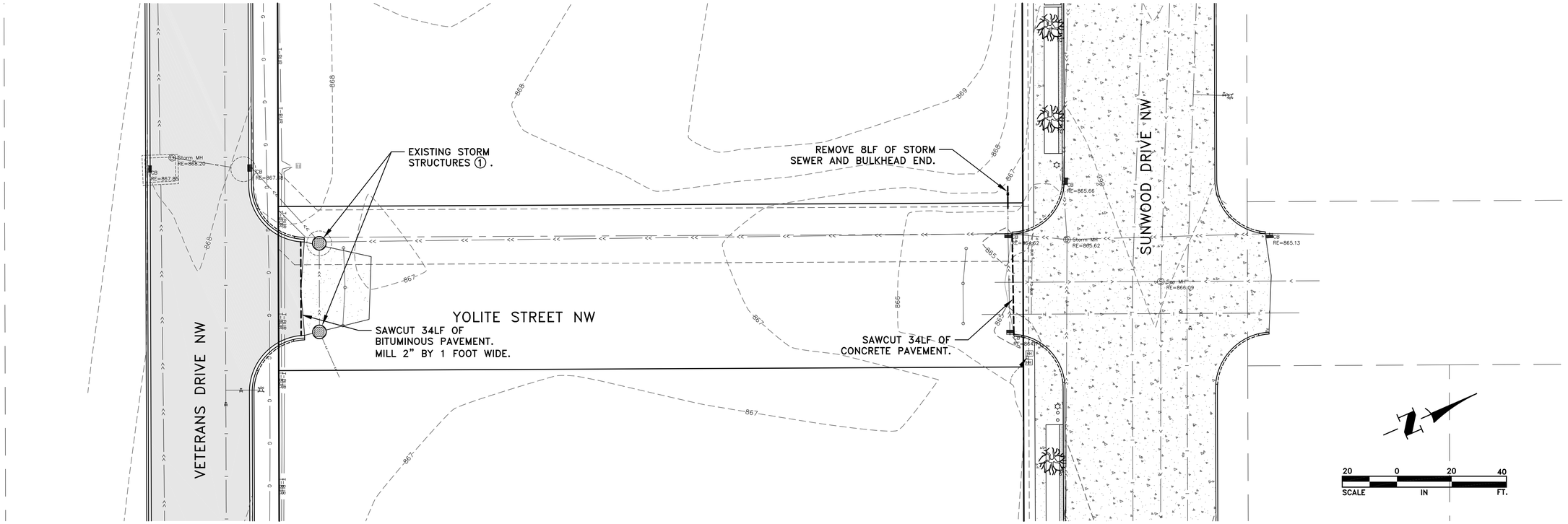
TYPICAL SECTIONS

CITY OF RAMSEY, MINNESOTA

SHEET 10 OF 21 SHEETS

4163.01

REFERENCE NOTES:
① THE EXISTING STORM STRUCTURES ARE BURIED BELOW GRADE.




| DATE | REVISION |
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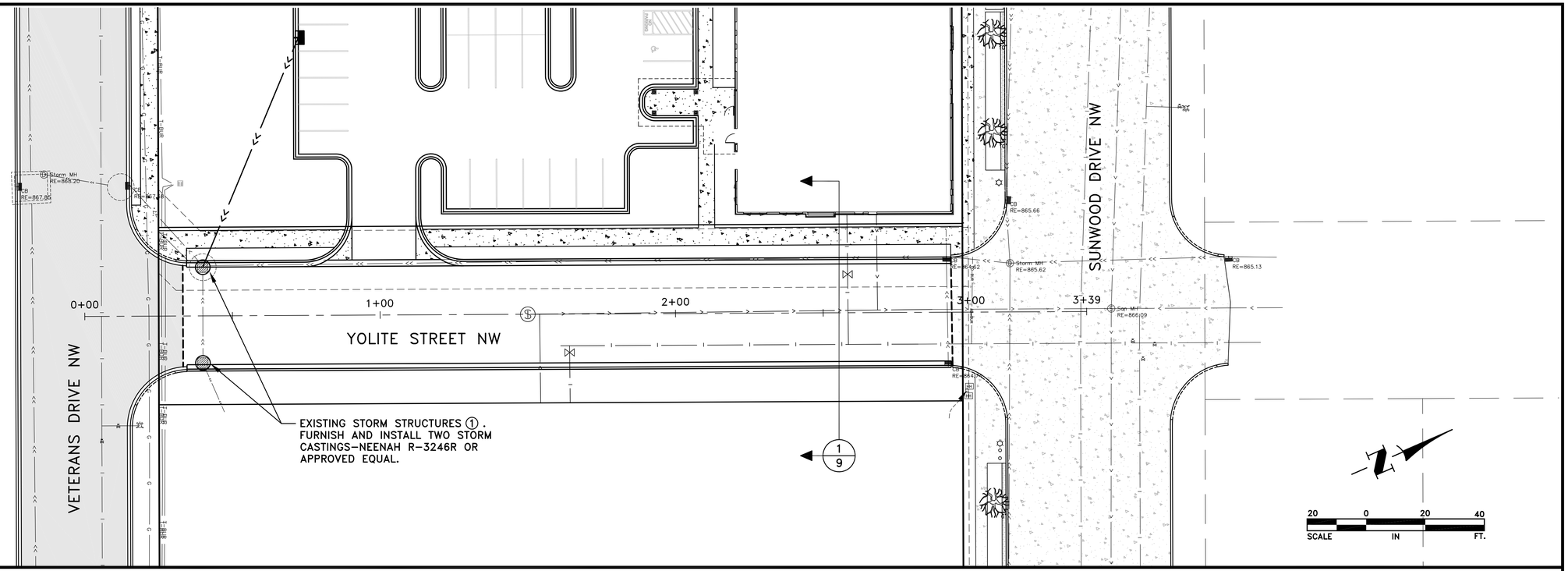
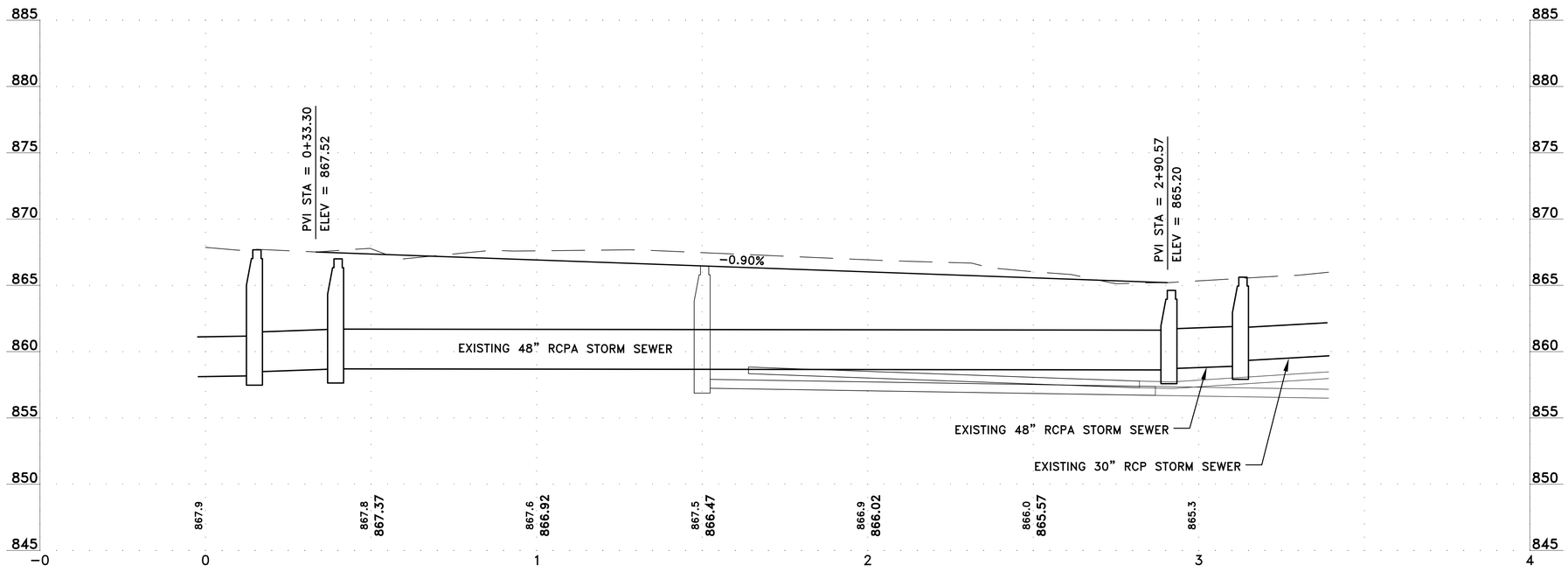
YOLITE STREET

EXISTING CONDITIONS AND REMOVALS
CITY OF RAMSEY, MINNESOTA

SHEET 11 OF 21 SHEETS

4163.01




REFERENCE NOTES:
(1) THE EXISTING STORM STRUCTURES ARE BURIED BELOW GRADE.

| DATE | REVISION |
|---|---|
| | |

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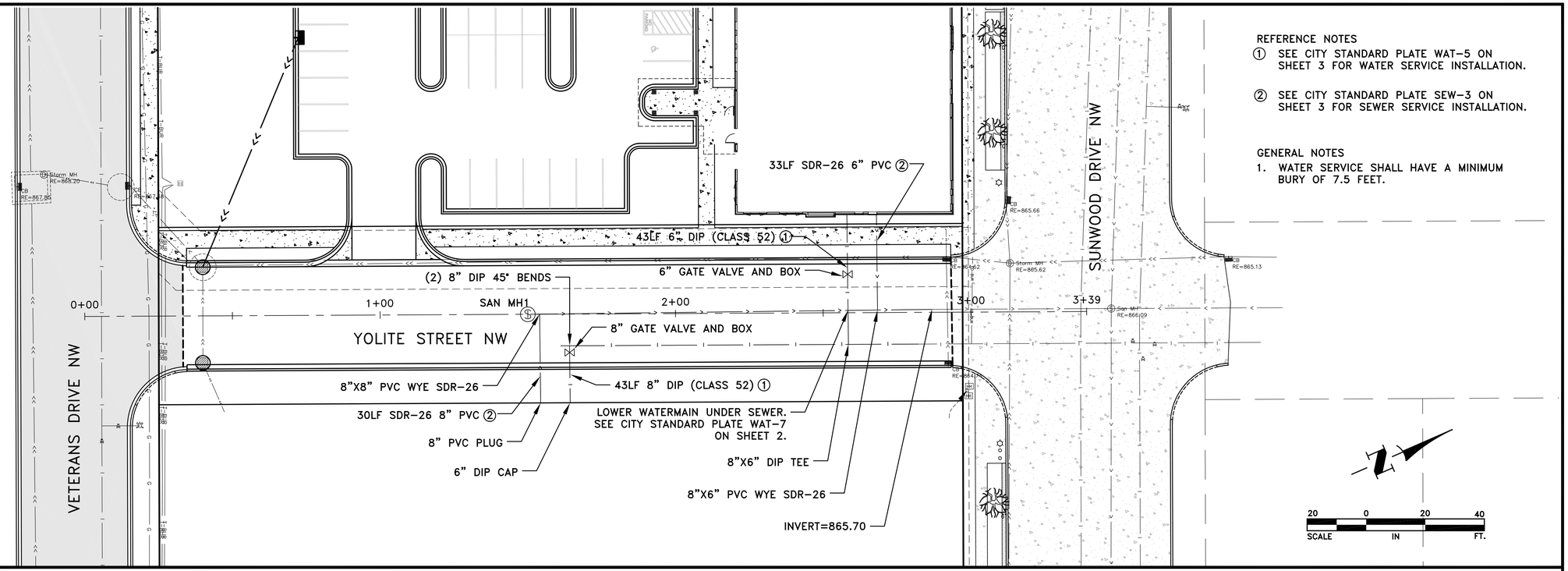
YOLITE STREET

STREET PLAN AND PROFILE

CITY OF RAMSEY, MINNESOTA

SHEET 12 OF 21 SHEETS

4163.01




REFERENCE NOTES

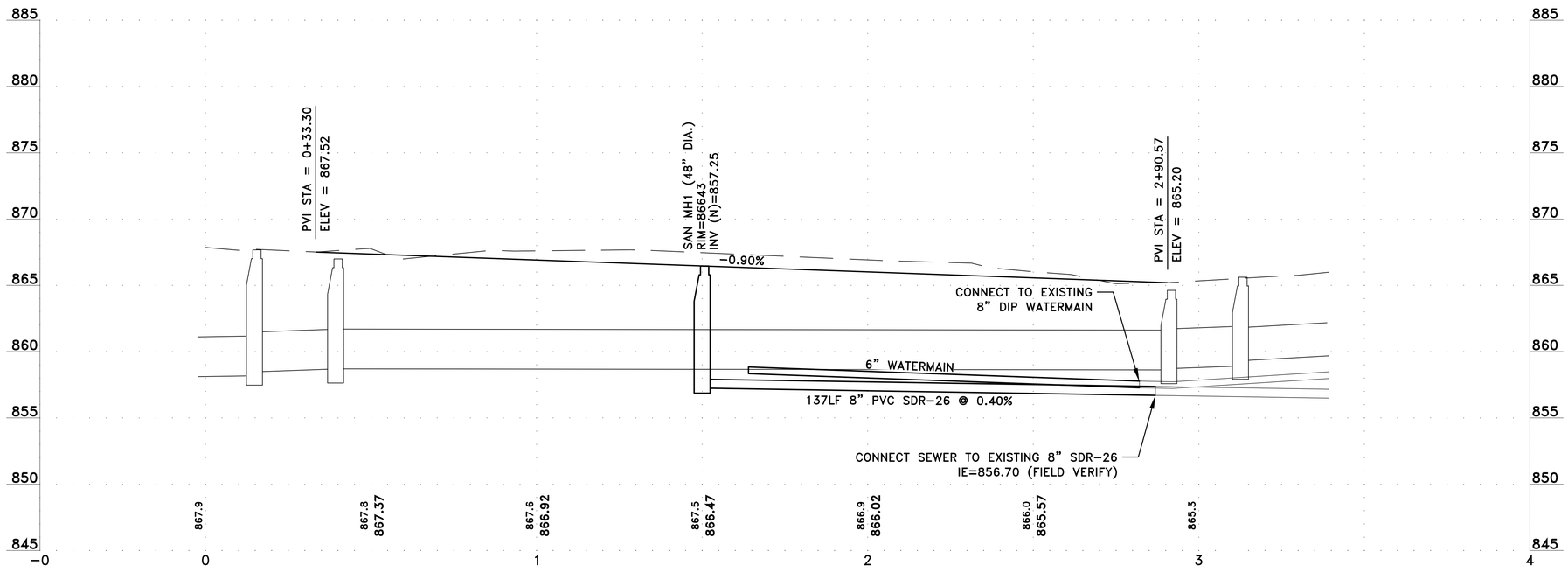
① SEE CITY STANDARD PLATE WAT-5 ON SHEET 3 FOR WATER SERVICE INSTALLATION.

② SEE CITY STANDARD PLATE SEW-3 ON SHEET 3 FOR SEWER SERVICE INSTALLATION.

GENERAL NOTES

1. WATER SERVICE SHALL HAVE A MINIMUM BURY OF 7.5 FEET.

SCALE 20 0 20 40 IN FT.




| DATE | REVISION |
|---|---|
| | |

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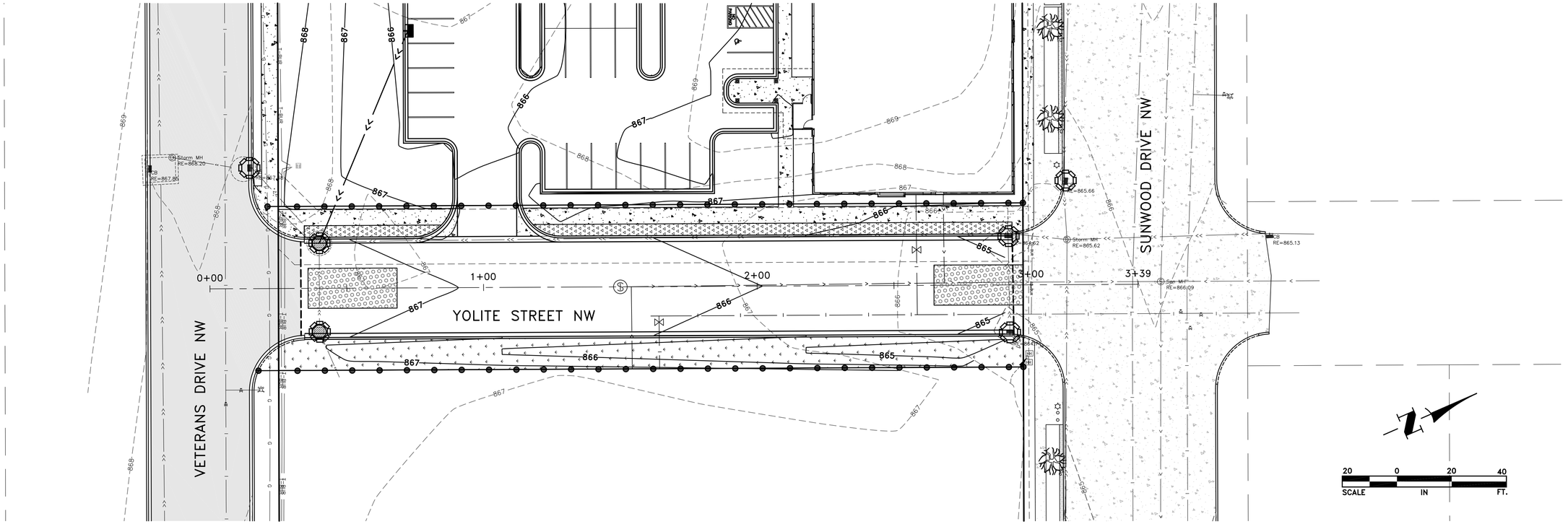
YOLITE STREET

# SANITARY SEWER AND WATERMAIN PLAN
CITY OF RAMSEY, MINNESOTA

SHEET 13 OF 21 SHEETS

4163.01




GENERAL EROSION CONTROL NOTES:

1. EROSION CONTROL SHALL CONFORM TO THE Mn/DOT EROSION CONTROL HANDBOOK.
2. THE CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROL FACILITIES (BMP'S) PRIOR TO GRADING AND REMOVAL ACTIVITIES. BMP'S SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION ACTIVITIES AND POTENTIAL FOR EROSION HAS PASSED.
3. THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREA AT ANY GIVEN TIME.
4. BMP'S SHALL BE INSPECTED DAILY BY THE CONTRACTOR. OBSERVATIONS SHALL BE RECORDED IN THE INSPECTION LOG.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PROPERLY REMOVED AND DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION.
6. SITE STABILIZATION SHALL OCCUR WITHIN 7 DAYS OF FINAL GRADING, OR PRIOR TO FINAL GRADING IF LOOSE SOIL IS UNWORKED FOR MORE THAN 7 DAYS.

## EROSION AND SEDIMENT CONTROL LEGEND

- SILT FENCE SEE 1/2
- INLET PROTECTION SEE SHEET 3.
- ROCK CONSTRUCTION ENTRANCE SEE SHEET 3.
- MNDOT SEED MIX 25–121
- MNDOT SEED MIX 25–121 WITH TYPE 1 DISK ANCHORED MULCH AND FERTILIZER SEE SHEET 2 FOR APPLICATION RATES.

| DATE | REVISION |
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| | |

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YOLITE STREET

# GRADING AND EROSION CONTROL PLAN
CITY OF RAMSEY, MINNESOTA

SHEET 14 OF 21 SHEETS

4163.01

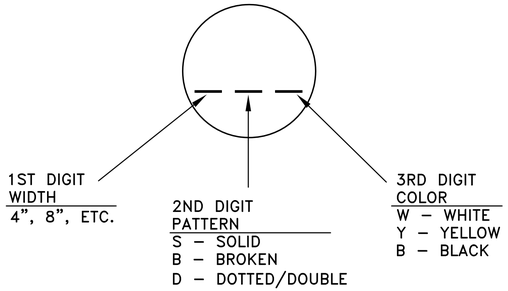
PERMANENT PAVEMENT MARKING GENERAL NOTES AND GUIDELINES:

1. THE ENGINEER'S INVOLVEMENT IN THE APPLICATION OF THE MATERIAL SHALL BE LIMITED TO FIELD CONSULTATION AND INSPECTION. THE CONTRACTOR WILL PLACE NECESSARY "SPOTTING" AT APPROPRIATE POINTS TO PROVIDE HORIZONTAL CONTROL FOR STRIPING TO DETERMINE NECESSARY STARTING AND CUTOFF POINTS. LONGITUDINAL JOINTS, PAVEMENT EDGES AND EXISTING MARKINGS MAY SERVE AS HORIZONTAL CONTROL WHEN SO DIRECTED.
2. EDGE LINES AND LANE LINES ARE TO BE BROKEN ONLY AT INTERSECTIONS WITH PUBLIC ROADS AND AT PRIVATE ENTRANCES IF THEY ARE CONTROLLED BY A YIELD SIGN, STOP SIGN OR TRAFFIC SIGNAL. THE BREAK POINT IS TO BE AT THE START OF THE RADIUS FOR THE INTERSECTION OR AT MARKED STOP LINES OR CROSSWALKS.
3. A TOLERANCE OF 1/4 INCH UNDER OR 1/4 OVER THE SPECIFIED WIDTH WILL BE ALLOWED FOR STRIPING PROVIDED THE VARIATION IS GRADUAL AND DOES NOT DETRACT FROM THE GENERAL APPEARANCE. BROKEN LINE SEGMENTS MAY VARY UP TO 1/2 FOOT FROM THE SPECIFIED LENGTHS PROVIDED THE OVER AND UNDER VARIATIONS ARE REASONABLY COMPENSATORY. ALIGNMENT DEVIATIONS FROM THE CONTROL GUIDE SHALL NOT EXCEED 1 INCH. MATERIAL SHALL NOT BE APPLIED OVER LONGITUDINAL JOINTS. ESTABLISHMENT OF APPLICATION TOLERANCES SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLY AS CLOSELY AS PRACTICABLE WITH THE PLANNED DIMENSIONS.
4. THE ROAD SURFACE SHALL BE CLEANED AT THE DIRECTION OF THE ENGINEER JUST PRIOR TO APPLICATION. PAVEMENT CLEANING SHALL CONSIST OF AT LEAST BRUSHING WITH A ROTARY BROOM (NON-METALLIC) OR AS RECOMMENDED BY THE MATERIAL MANUFACTURER AND ACCEPTABLE TO THE ENGINEER.
5. THE EPOXY MARKING APPLICATION SHALL IMMEDIATELY FOLLOW THE PAVEMENT CLEANING. GLASS BEADS SHALL BE APPLIED IMMEDIATELY AFTER APPLICATION OF THE EPOXY RESIN LINE TO PROVIDE AN IMMEDIATE NO-TRACK SYSTEM.
6. FOR 15 MIL APPLICATIONS, GLASS BEADS SHALL BE APPLIED AT A RATE OF AT LEAST 25 LB/GAL. THE "NO-TRACKING" CONDITION SHALL BE DETERMINED ON AN APPLICATION OF SPECIFIED THICKNESS TO THE PAVEMENT AND COVERED WITH GLASS BEADS AT THE RATE OF AT LEAST 25 LB/GAL.
7. OPERATIONS SHALL BE CONDUCTED ONLY WHEN THE ROAD PAVEMENT SURFACE TEMPERATURES ARE 50 DEGREES °F OR GREATER.
8. PERMANENT PAVEMENT MARKINGS SHALL NOT BE PLACED OVER TEMPORARY TAPE MARKINGS.

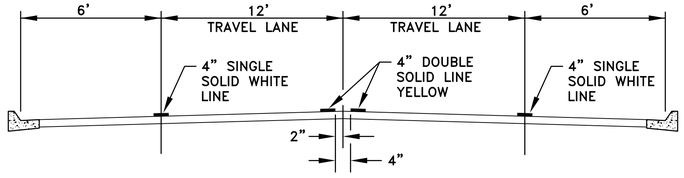
## STRIPING KEY & LEGEND

CIRCLE – EPOXY

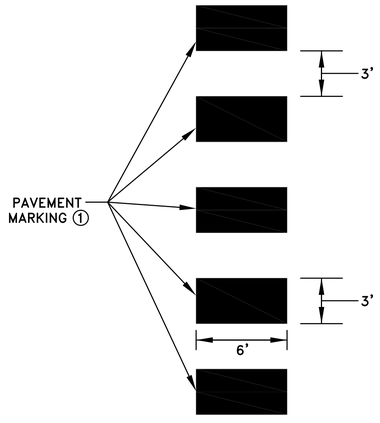
SQUARE – PREFORMED THERMOPLASTIC




EXAMPLE: (4SW) = 4" SOLID LINE WHITE-EPOXY




1/15 YOLITE STREET




2/15 CROSSWALK DETAIL

| DATE | REVISION |
|---|---|
| | |

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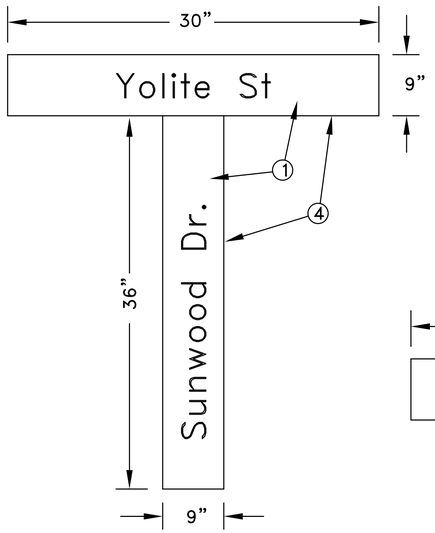
YOLITE STREET

STRIPING LEGEND AND NOTES

CITY OF RAMSEY, MINNESOTA

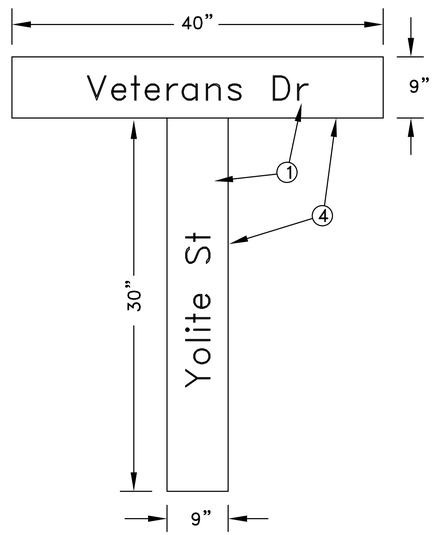
SHEET 15 OF 21 SHEETS

4163.01




SIGN 1 DETAIL

NO SCALE

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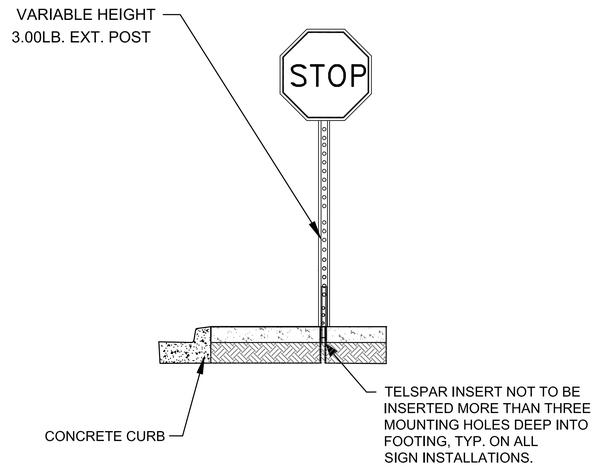


1/16 SIDEWALK MOUNT BREAK–AWAY SIGN INSTALLATION

| SIGN LEGEND | SIGN NUMBER | SIGN SIZE | SIGN MESSAGE | SIGN COLOR ⑤ | POSTS | | | REMARKS | ESTIMATED QUANTITY |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER AND TYPE | NUMBER OF KNEE BRACES | LENGTH (FEET) | | |
| STOP | R1–1 | 30”X30” | STOP | WHITE ON RED | 2–U | | 13.5 | | 2 |
| 1 | | 30”X9”<br>36”X9” | YOLITE STREET ①<br>SUNWOOD DRIVE ⑥ | WHITE ON GREEN | | ②③ | | SEE DETAIL ON THIS SHEET | 1 |
| 2 | | 30”X9”<br>40”X9” | YOLITE STREET ①<br>VETERANS DR ⑥ | WHITE ON GREEN | | ②③ | | SEE DETAIL ON THIS SHEET | 1 |

GENERAL NOTES:

1. ALL SIGNS SHALL HAVE TYPE IX SHEETING UNLESS NOTED.
2. SIGNS CONSTRUCTED IN THE SIDEWALK SHALL BE CONSTRUCTED PER 1/16.

REFERENCE NOTES:

① ALL STREET NAME SIGNS SHALL HAVE 6” AND 4 ½” LETTERING FOR UPPERCASE AND LOWERCASE LETTERS, RESPECTIVELY. SERIES ”B” LETTERING AND NUMBERING SHALL BE USED WITH 75% SPACING.

② MOUNTING BRACKETS SHALL BE E–450 FOURWAY BRACKET OR EQUAL.

③ MOUNTING POSTS SHALL BE 2.5” O.D. BY 10’ GALVANIZED TUBE. POSTS SHALL BE IMBEDDED IN A 12” DIAMETER BY 24” DEEP CONCRETE FOOTING. CONCRETE MIX 3Y43 SHALL BE USED FOR THE FOOTING.

④ SIGN PLATES SHALL BE SINGLE FACED CONSTRUCTED OF 0.100 ALUMINUM TYPE IX SHEETING.

⑤ SIGN COLOR SHALL BE AS SHOWN IN THE MnDOT STANDARD SIGNS MANUAL, UNLESS NOTED.

⑥ ALL STREET NAME SIGNS SHALL BE NOTCHED AND PUNCHED AND HAVE A ⅜” WHITE BORDER.

| DATE | REVISION |
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| | |

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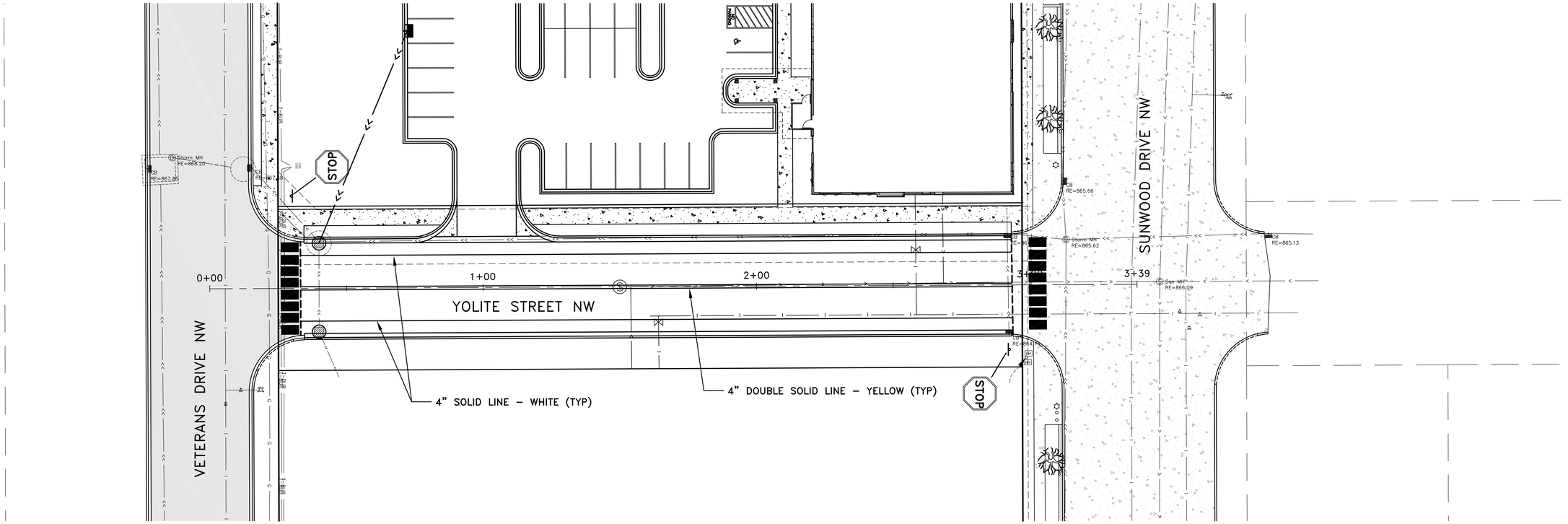
YOLITE STREET

SIGNAGE LEGEND AND NOTES

CITY OF RAMSEY, MINNESOTA

SHEET 16 OF 21 SHEETS

4163.01

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YOLITE STREET

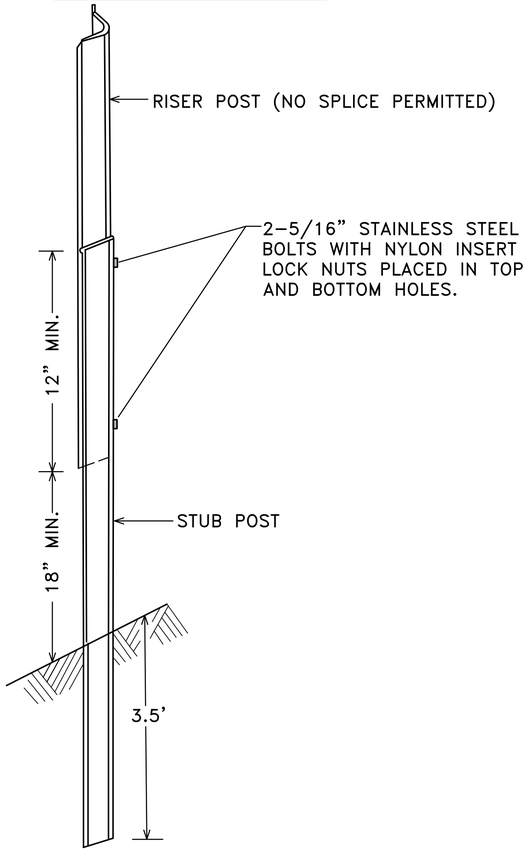
STRIPING & SIGNAGE PLAN

CITY OF RAMSEY, MINNESOTA

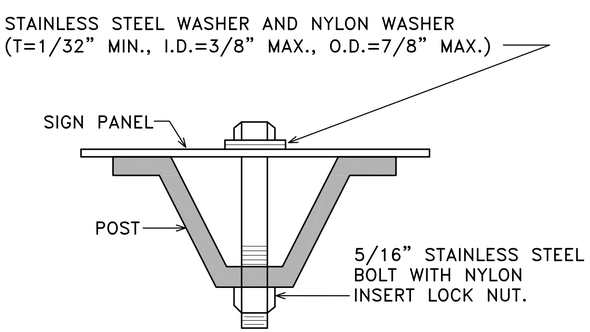
SHEET 17 OF 21 SHEETS

4163.01

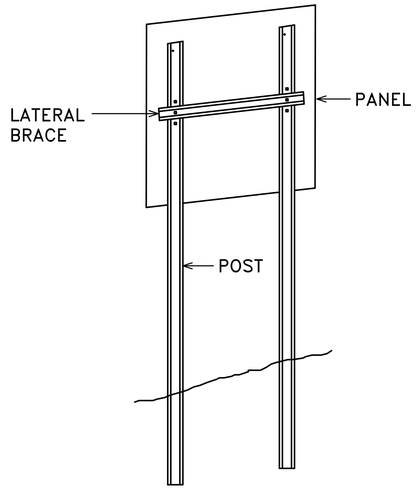
## TYPE C & D POST



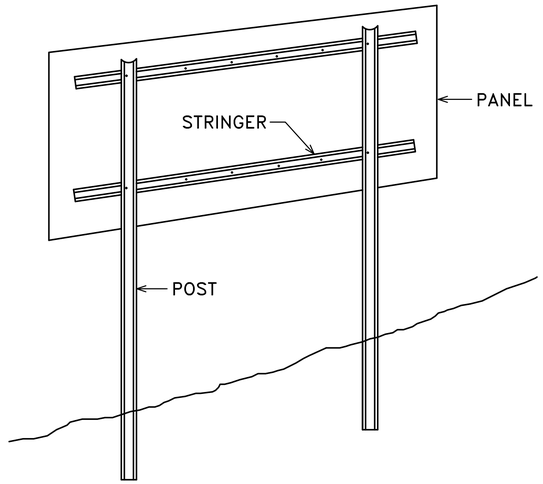

U POST SPLICE



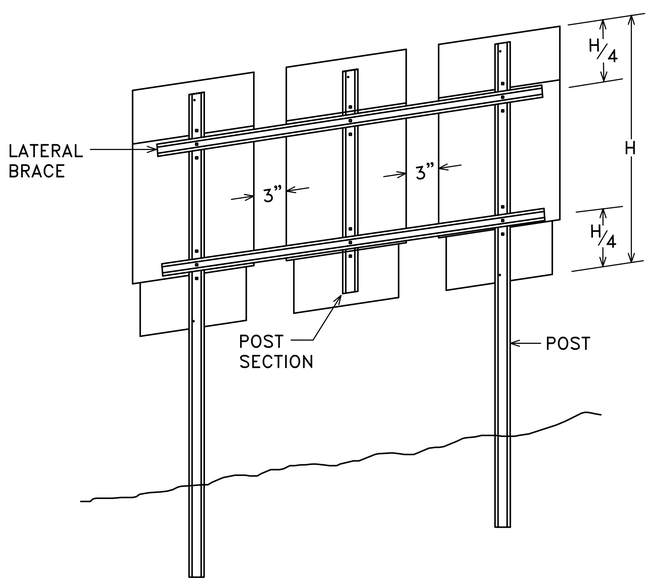

U POST MOUNTING
TYPE C SIGNS




TYPICAL TYPE C INSTALLATION




TYPICAL TYPE D INSTALLATION




MODIFIED TYPE C INSTALLATION

NOTES:

1. USE 3 LB/FT STUB POSTS, RISER POSTS, STRINGERS, KNEE BRACES, LATERAL BRACES AND KNEE BRACE STUB POSTS. ALL SHALL CONFORM TO MN/DOT 3401.
2. SEE TYPE D SIGN POSTS LENGTHS AND SPACINGS, SEE SIGN DATA SHEET.
3. TYPE D SIGN PANELS SHALL BE BOLTED TO STRINGERS AT 24" MAXIMUM INTERVALS IN ACCORDANCE WITH THE TYPE D STRINGER AND PANEL–JOINT DETAIL (SEE STANDARD SIGNS MANUAL).
4. MOUNTING (PUNCH CODE) FOR TYPE C SIGN PANELS SHALL BE AS INDICATED IN THE STANDARD SIGNS MANUAL UNLESS OTHERWISE SPECIFIED.
5. ALL RISER (VERTICAL) U POSTS SHALL BE SPLICED. DRIVEN STUB POSTS SHALL BE AT LEAST 7' LONG.
6. USE STAINLESS STEEL 5/16" BOLTS, WASHERS AND NYLON INSERT LOCK NUTS AS SHOWN FOR ALL GROUND MOUNTED AND OVERHEAD MOUNTED SIGNS.
7. STAINLESS STEEL WASHER WITH SAME DIMENSIONS SHALL BE PROVIDED BETWEEN ALL NYLON WASHERS AND BOLT HEADS.
8. BRACING STUBS SHALL BE NO MORE THAN 4" ABOVE GROUND AND EMBEDDED AT LEAST 3 1/2'.
9. A–FRAME BRACKET SHALL BE STEEL CONFORMING TO MN/DOT 3306 AND GALVANIZED IN ACCORDANCE WITH MN/DOT 3394.
10. COLLARS SHALL BE USED TO SHIM OVERLAYS AND DEMOUNTABLE LEGEND AWAY FROM PANEL WHERE INTERFERENCE WITH BOLT HEADS IS ENCOUNTERED. MN/DOT 3352.2A5.
11. 2 POST TYPE C SIGNS SHALL BE REINFORCED WITH AT LEAST ONE LATERAL BRACE. INSTALLATIONS WHERE THE TOTAL PANEL HEIGHT IS 60" OR MORE SHALL HAVE TWO LATERAL BRACES LOCATED APPROXIMATELY AT THE QUARTER POINTS.
12. WHERE 2 SINGLE POST TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED LATERALLY BY AT LEAST 2 BRACES, BOLTED AT EACH POST AND LOCATED APPROXIMATELY AT THE QUARTER POINTS.
13. WHERE 3 OR MORE TYPE C SIGNS ARE INSTALLED SIDE BY SIDE, THEY SHALL BE REINFORCED LATERALLY BY AT LEAST 2 BRACES, BOLTED AT EACH POST AND POST SECTION AND LOCATED APPROXIMATELY AT THE QUARTER POINTS AS SHOWN IN MODIFIED TYPE C INSTALLATION.

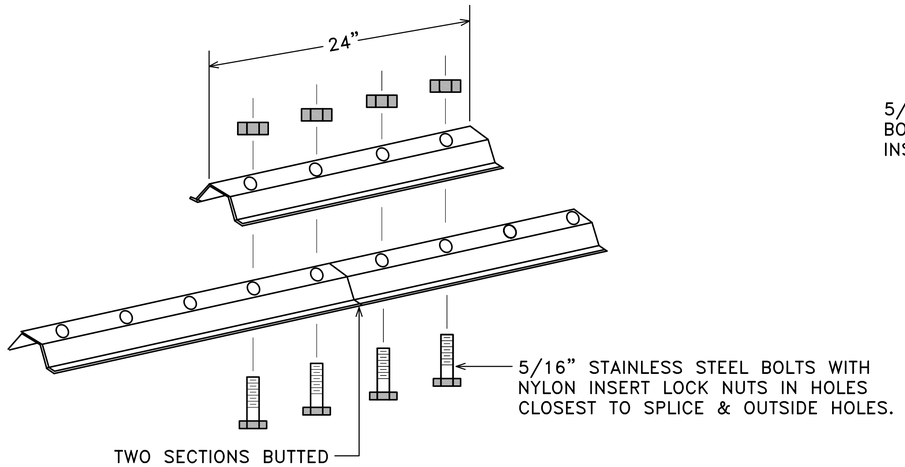
# TYPE C & D SIGN

# STRUCTURAL DETAILS

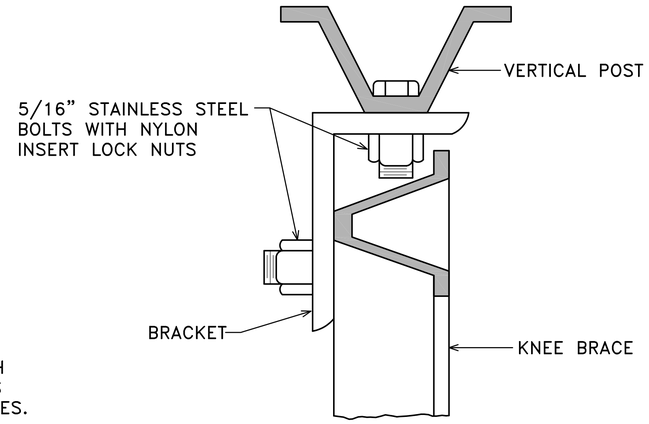


REVISED: 1–7–08

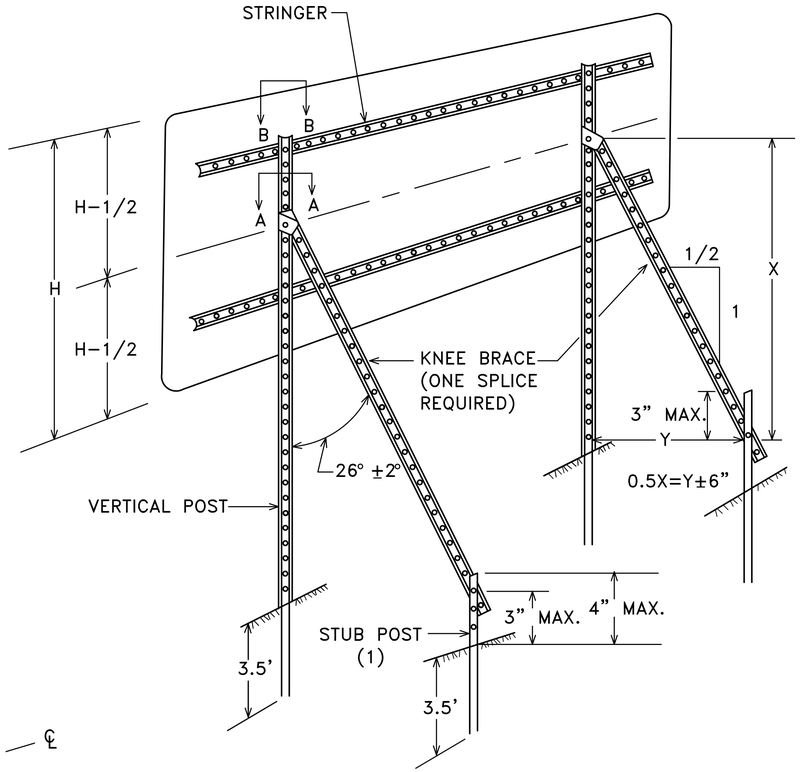
YOLITE STREET
RAMSEY, MINNESOTA



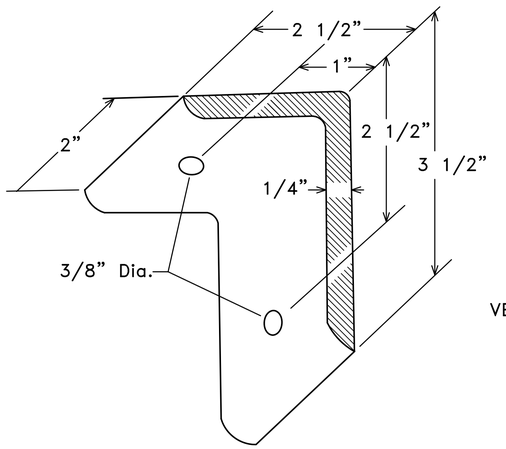

## LATERAL BRACE OR STRINGER SPLICE DETAIL (EXPLODED VIEW)




SECTION A–A

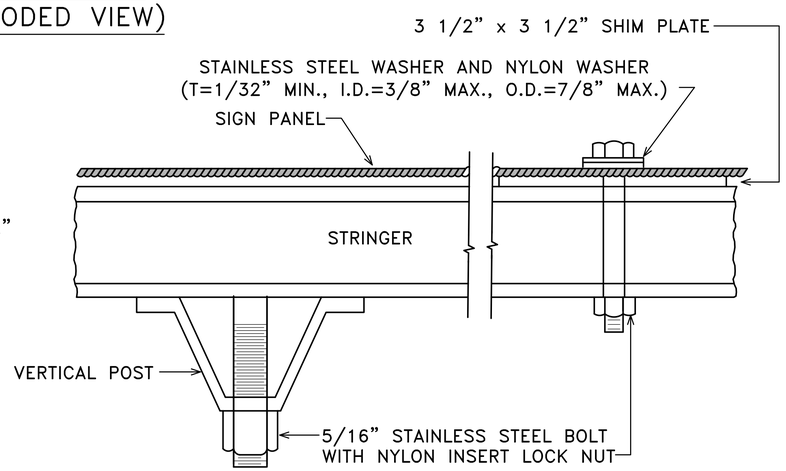



TYPICAL "A–FRAME" INSTALLATION
TYPE "D" SIGNS

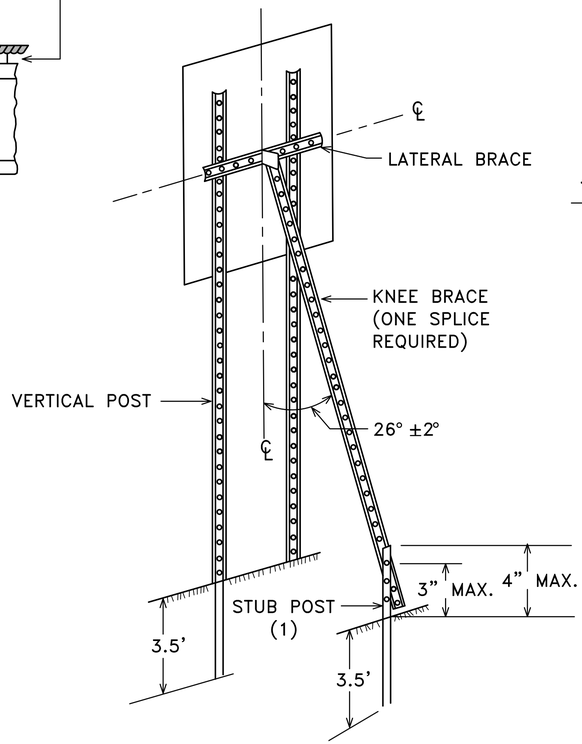



A–FRAME BRACKET

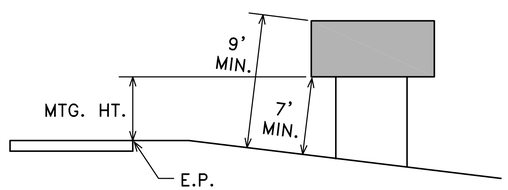
(STEEL MN/DOT 3306 GALVANIZED PER MN/DOT 3394)




SECTION B–B

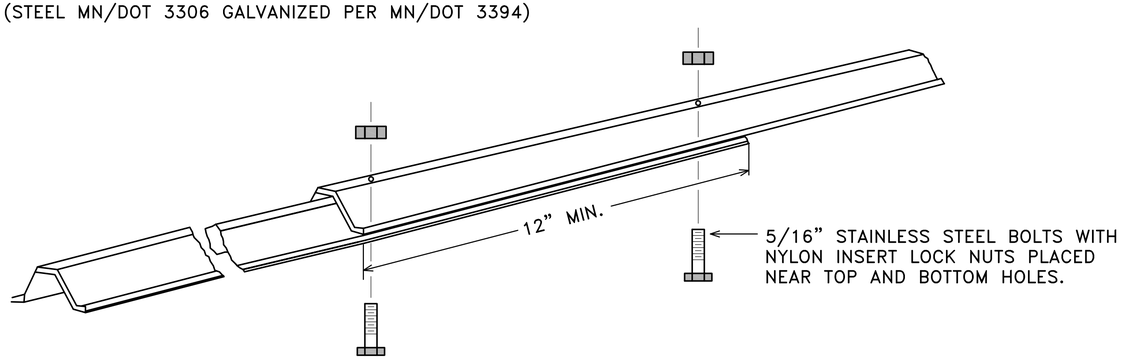



TYPICAL "A–FRAME" INSTALLATION
TYPE "C" SIGNS




TYPICAL MOUNTING

(1) OFFSET STUB POST 1' TOWARD ROADWAY RELATIVE TO VERTICAL POST. ATTACH STUB POST AND KNEE BRACE BACK TO BACK.




KNEE BRACE SPLICE

# TYPE C & D SIGN

# STRUCTURAL DETAILS

Sheet 2 of 3

REVISED: 1–7–08

YOLITE STREET
RAMSEY, MINNESOTA

Sheet No. 19 of 21 Sheets

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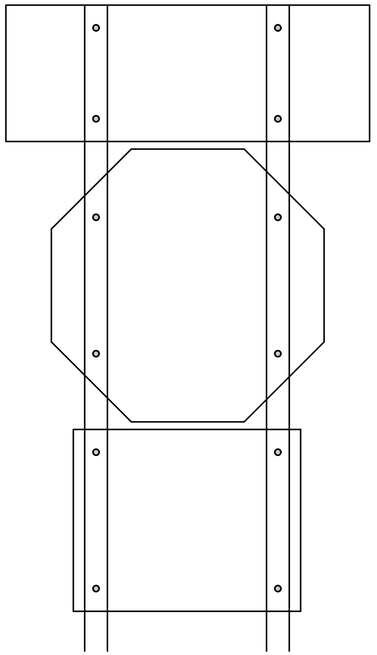
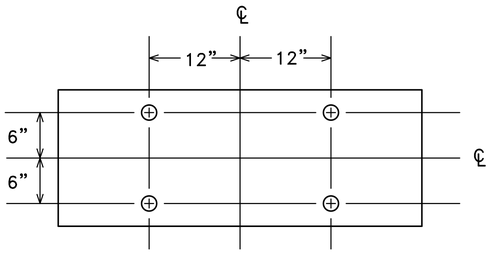
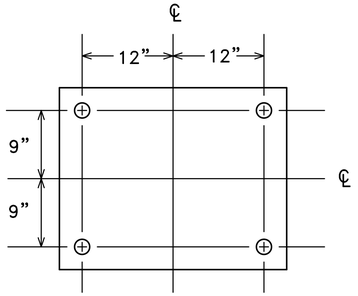


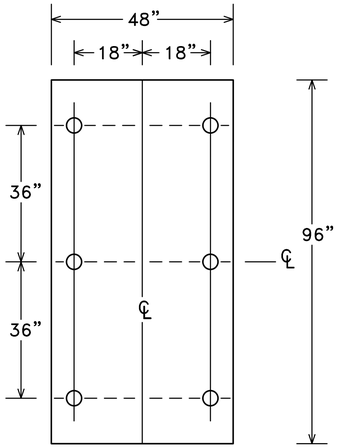
R6-1, R1-1 & (R6-3 OR R6-3a)
MOUNTING



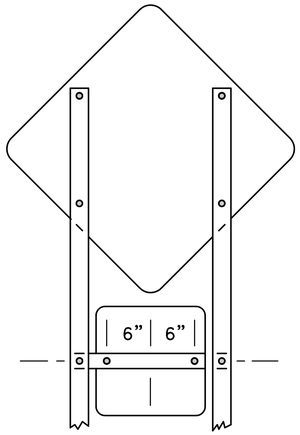

PUNCHING FOR R6-1(48"x18")



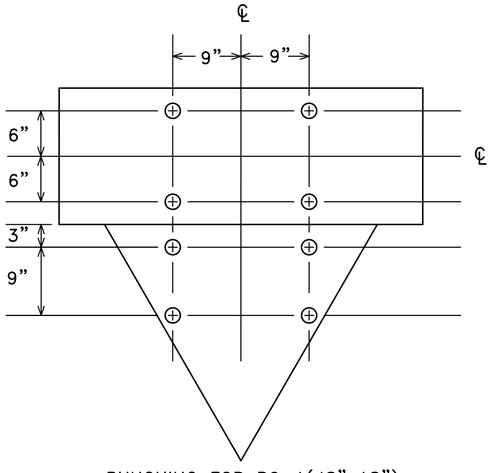

PUNCHING FOR R6-3 OR R6-3a(30"x24")



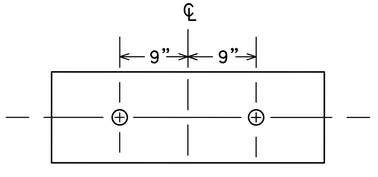

PUNCHING FOR R2-4b
SPEED LIMIT



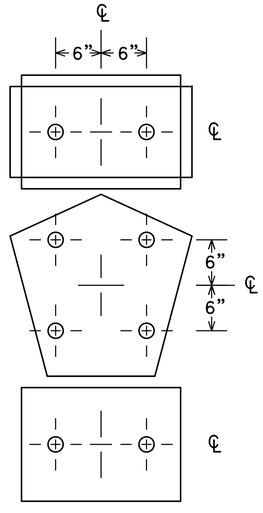

(W1-1, W1-2, W1-3, W1-4 OR W1-5) & W13-1
MOUNTING



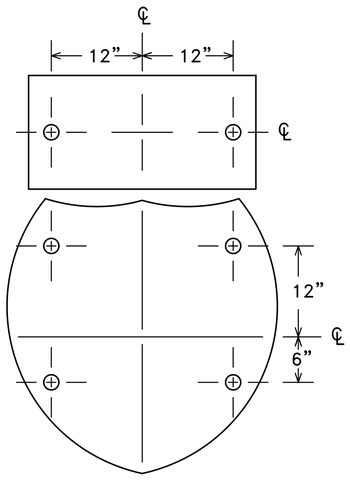

PUNCHING FOR R6-1(48"x18")
& R1-2(36"x36"x36")



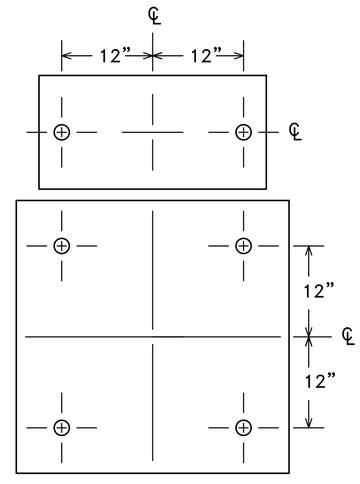

PUNCHING FOR R6-1(36"x12")




M2-1A [21"x15"] OR
(M3-1A, M3-2A, M3-3A OR M3-4A) [24"x12"] AND
M1-6 [24"x24"] AND
(M5-1A, M5-2A, M6-1A, M6-2A, M6-3A M6-4A, M6-5A OR M6-6A) [21"x15"]
PUNCHING




(M3-1A, M3-2A, M3-3A OR M3-4A) [30"x15"] AND
M1-1 [45"x36" OR 36"x36"]
PUNCHING




(M3-1, M3-1A, M3-2, M3-2A, M3-3, M3-3A M3-4 OR
M3-4A) [30"x15"] AND (M1-4 OR M1-5A) [36"x36"]
PUNCHING

# TYPE C & D SIGN

## STRUCTURAL DETAILS

Sheet 3 of 3

REVISED: 10-28-08

YOLITE STREET
RAMSEY, MINNESOTA

Sheet No. 20 of 21 Sheets

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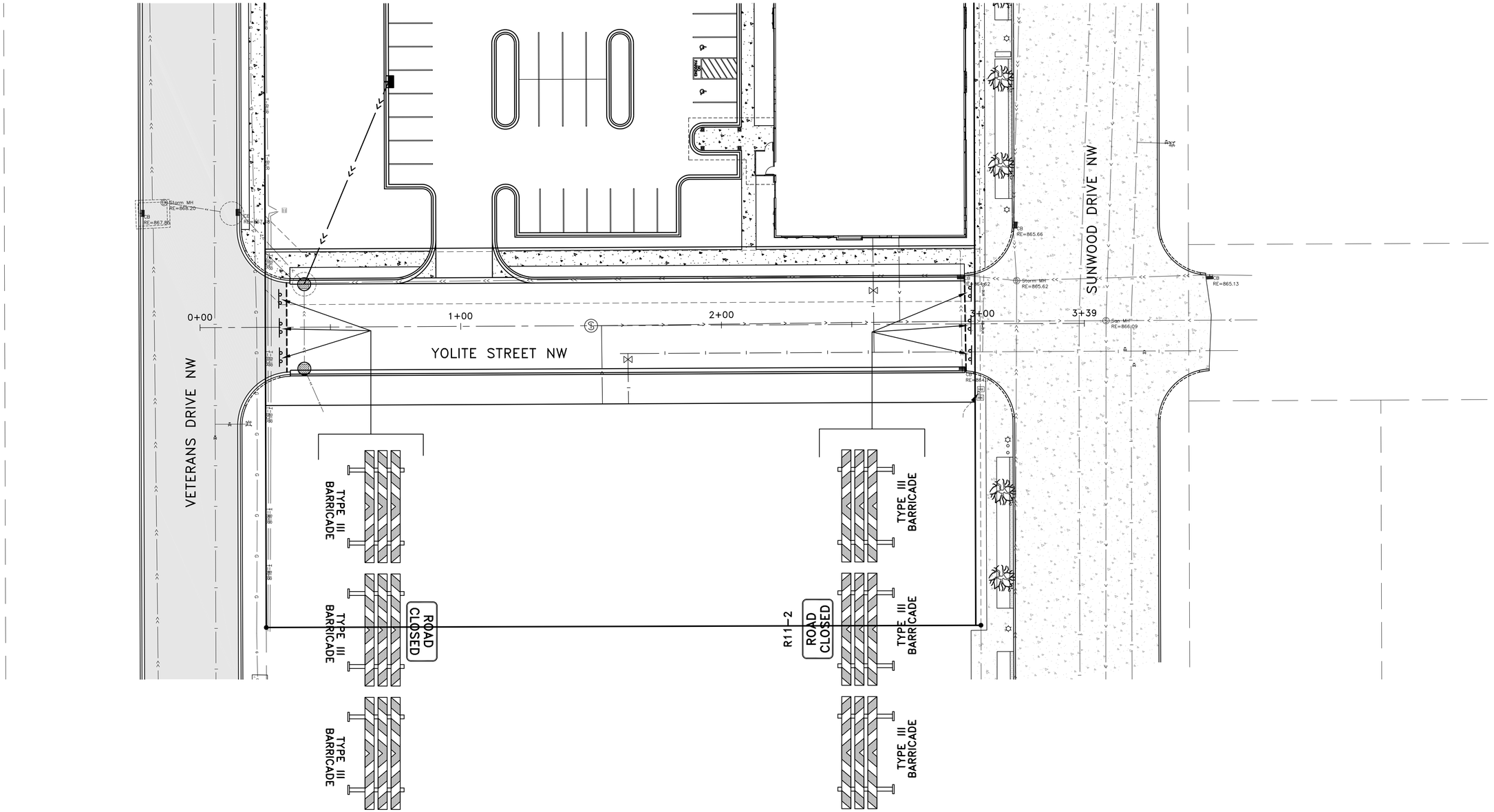


| DATE | REVISION |
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| | |

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Date 5-4-17 CRAIG J. JOCHUM, P.E. Lic. No. 23461

DESIGNED BY: CJJ
DRAWN BY: MSS
CHECKED BY: CJJ

Hakanson Anderson
Civil Engineers and Land Surveyors
3601 Thurston Ave., Anoka, Minnesota 55303
763-427-5860 FAX 763-427-0520
www.hakanson-anderson.com

YOLITE STREET

TRAFFIC CONTROL PLAN

CITY OF RAMSEY, MINNESOTA

SHEET 21 OF 21 SHEETS

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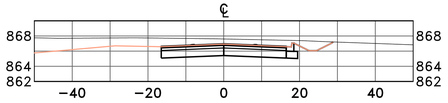


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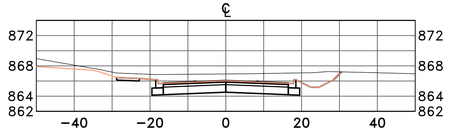


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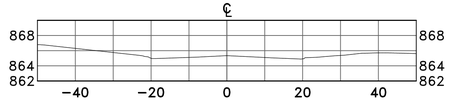


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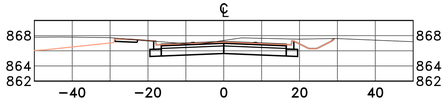


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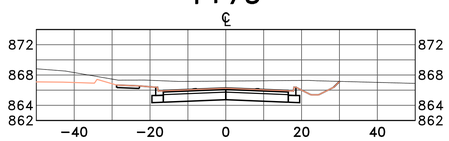


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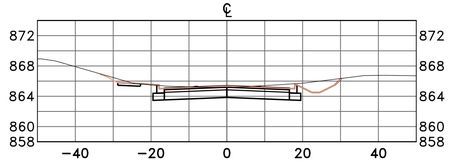


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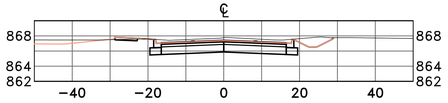


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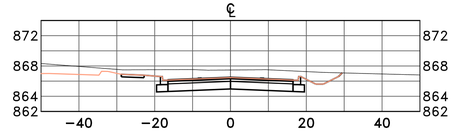


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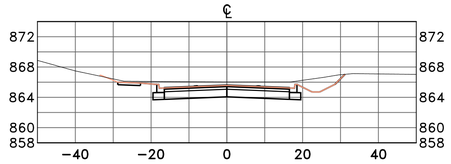


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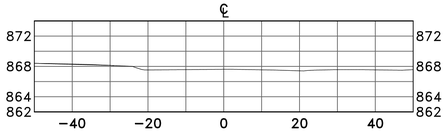


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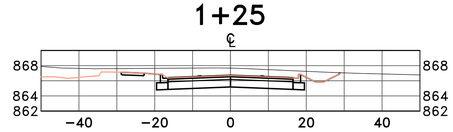


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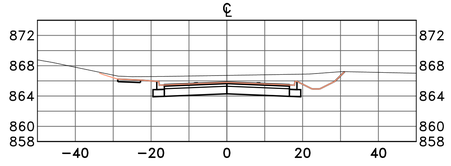


| DATE | REVISION |
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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

CRAIG J. JOCHUM, P.E.
Date 5-4-17 Lic. No. 23461

DESIGNED BY: CJJ
DRAWN BY: MSS
CHECKED BY: CJJ

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www.hakanson-anderson.com

YOLITE STREET

TYPICAL SECTIONS

CITY OF RAMSEY, MINNESOTA

SHEET X1 OF 21 SHEETS

4163.01