

PLAN SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS

TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER

SPRINGS

MARSH

TIMBER
ORCHARD
BRUSH
NURSERY

CATCH BASIN

FIRE HYDRANT

GATE VALVE

SANITARY SEWER MANHOLE

STORM SEWER MANHOLE

OVERPASS (Highway Over)

UNDERPASS (Highway Under)

BRIDGE

BUILDING (One Story Frame)

F-FRAME C-CONCRETE
S-STONE T-TILE
B-BRICK ST-STUCCO

IRON PIPE OR ROD

MONUMENT (STONE, CONCRETE, OR METAL)

WOODEN HUB

GRAVEL PIT

ROCK QUARRY

MAILBOX

SIGN

UTILITY SYMBOLS

POWER POLE LINE

TELEPHONE OR TELEGRAPH

POLE LINE

JOINT TELEPHONE AND POWER

ON POWER POLES

ON TELEPHONE POLES

POWER POLE

ANCHOR

STEEL TOWER

STREET LIGHT

PEDESTAL (TELEPHONE CABLE TERMINAL)

GAS MAIN

WATER MAIN

CONDUIT

TELEPHONE CABLE IN CONDUIT

ELECTRIC CABLE IN CONDUIT

TELEPHONE MANHOLE

ELECTRIC MANHOLE

BURIED TELEPHONE CABLE

BURIED ELECTRIC CABLE

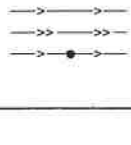
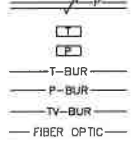
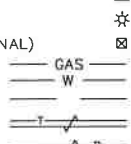
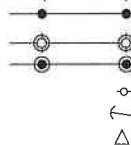
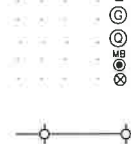
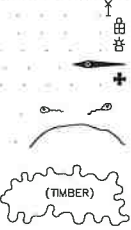
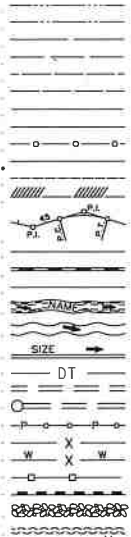
BURIED TELEVISION CABLE

BURIED FIBER OPTIC

SEWER, (SANITARY)

SEWER, (STORM)

SEWER MANHOLE



CITY OF PLYMOUTH

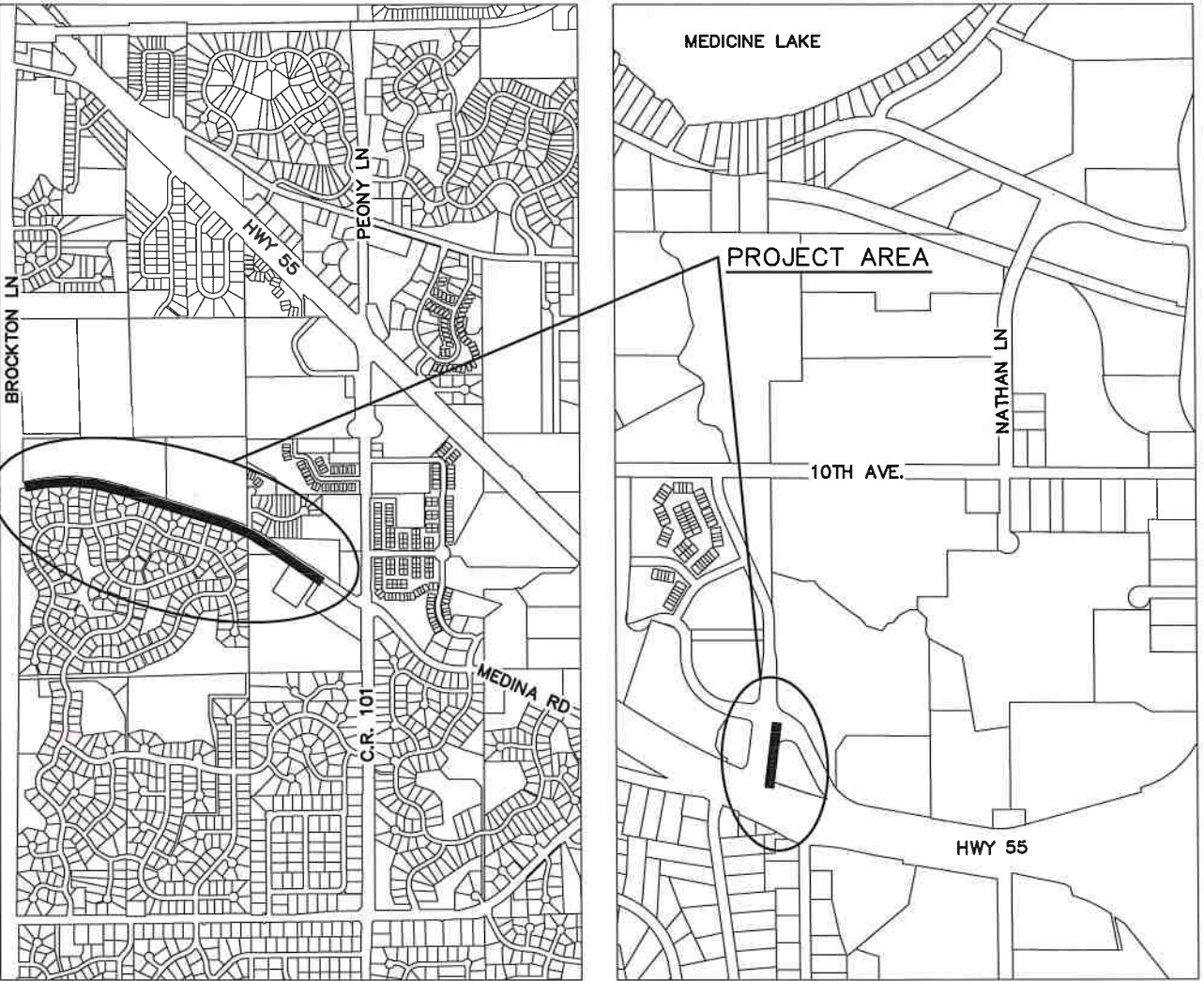
HENNEPIN COUNTY, MINNESOTA

CONSTRUCTION PLANS FOR :

GRADING, AGGREGATE BASE, BITUMINOUS TRAIL, CONCRETE PEDESTRIAN RAMPS, CONCRETE CURB & GUTTER, DRAINAGE AND TURF ESTABLISHMENT.

MEDINA ROAD AND REVERE LANE TRAIL PROJECT

CITY PROJECT NO. PR189001.001 & PR189001.002



SCALES :

PLAN _____ 50'
(PLAN) _____ 30'
PROFILE _____ HORIZ. _____ 50'
(X PROFILE) _____ HORIZ. _____ 30'
VERT. _____ 5'
X-SECTIONS _____ HORIZ. _____ 10'
VERT. _____ 5'

GOVERNING SPECIFICATIONS:

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION THE MOST CURRENT, "STANDARD SPECIFICATIONS FOR CONSTRUCTION" THE MOST CURRENT CITY OF PLYMOUTH, "ENGINEERING GUIDELINES", AND THE CONTRACT DOCUMENTS, INCLUDING THE SPECIAL PROVISIONS, SHALL GOVERN. ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

NOTE:

THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, WATER, ETC. ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITIES BEFORE COMMENCING EXCAVATION.

INDEX:

SHEET NO.	SHEET DESCRIPTION
1	TITLE
2-3	GENERAL LAYOUT & EROSION CONTROL
4	GENERAL NOTES & DETAILS
5	DETAILS
6-11	ADA DETAILS
12-13	PEDESTRIAN RAMP PLANS
14-16	CONSTRUCTION PLANS
17-31	CROSS SECTIONS

THIS PLAN SET CONTAINS 31 SHEETS

I HEREBY CERTIFY THAT THIS PLAN 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.

ENGR. Michael J. Payne, P.E.
MICHAEL J. PAYNE, P.E., ASSISTANT CITY ENGINEER
Reg. No. 50484 Date 3-30-18



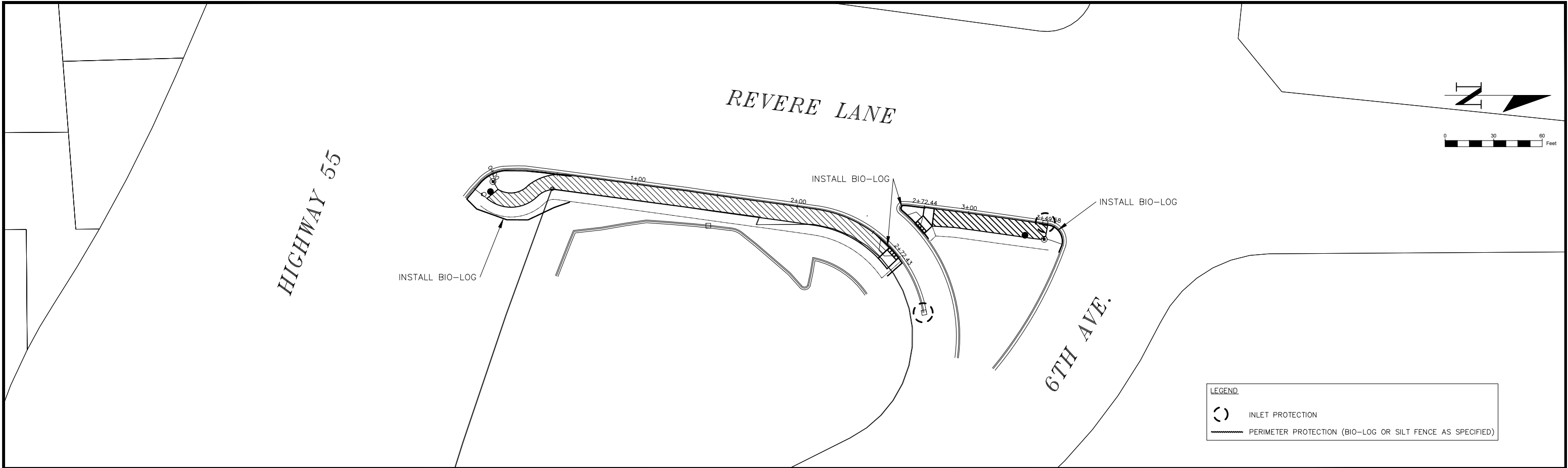
STATE AID
PROJECT NO.

CITY PROJECT NO.
PR189001.001 &
PR 189001.002

SHEET
1
OF
31

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL QUALITY D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

GOPHER STATE ONE CALL: (651) 454-0002



					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.							PLYMOUTH, MINNESOTA		REVERE LANE TRAIL		STATE AID PROJECT NO. ###		DRAWN BY T. QUAST		DATE 3-18		SHEET 3 OF 31	
					Signature: 							MEDINA ROAD & REVERE LANE TRAIL PROJECT		GENERAL LAYOUT & EROSION CONTROL		COUNTY PROJECT NO. ###		DESIGNED BY M. PAYNE		11-17			
					Date: 3/30/18 License#: 50484											CITY PROJECT NO. PR189001.001 & PR 189001.002		CHECKED BY M. PAYNE		3-18			
																		REVIEWED BY M. PAYNE		3-18			
NO	DATE	BY	CKD	APPR	REVISION																		

GENERAL NOTES

1. THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, WATER, ETC. ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE CALL BEFORE COMMENCING ANY EXCAVATION.
2. THE STRUCTURE LOCATIONS AND ELEVATIONS OF APPURTANCES SHOWN ON THE PLAN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED PRIOR TO COMMENCING ANY UTILITY INSTALLATION.
3. ALL EXCESS EXCAVATED MATERIAL IS THE PROPERTY OF THE CONTRACTOR.
4. ALL WATER MAIN GATE VALVES MUST BE OPERATIONAL AT ALL TIMES.
5. ALL USEABLE SALVAGED CASTINGS, VALVES, SIGNS, HYDRANTS, ETC. SHALL BE DELIVERED TO THE CITY OF PLYMOUTH PUBLIC WORKS.
6. ACCESS TO LOCAL BUSINESSES MUST BE MAINTAINED AT ALL TIMES THROUGHOUT CONSTRUCTION.
7. A MINIMUM OF 48 HRS. NOTICE IS REQUIRED FOR ALL SURVEY STAKING REQUESTS.
8. CONTRACTOR MUST MAINTAIN EROSION CONTROL FOR THE ENTIRE PROJECT.
9. CONTRACTOR MUST SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL, ADDRESSING ANY TEMPORARY CLOSURES OR DETOURS. REVIEW IS REQUIRED BY THE CITY OF PLYMOUTH.
10. TRAFFIC CONTROL MUST BE PROPERLY MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE MNDOT TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS BOOKLET.
11. THE 2018 CITY OF PLYMOUTH ENGINEERING STANDARD DETAIL SPECIFICATIONS FOR SEWER, WATER, STORM SEWER & STREETS APPLY TO THIS PROJECT.
12. NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS MARKED BY THE CITY OF PLYMOUTH FOR REMOVAL.
13. ALL PAVEMENT, INCLUDING DRIVEWAYS, ARE TO BE SAWCUT AT THE MATCH POINT.
14. INSTALL PEDESTRIAN RAMPS AT ALL SIDEWALK AND TRAIL LOCATIONS WITHIN THE PROJECT LIMITS.
15. CONTRACTOR SHALL PROTECT ALL STRUCTURES AND UTILITIES DURING CONSTRUCTION.
16. CURB AND GUTTER TO BE REMOVED SHALL BE MARKED IN THE FIELD BY THE ENGINEER.
17. CONTRACTOR SHALL PROTECT ALL CONCRETE & BITUMINOUS CURB AND GUTTER NOT MARKED FOR REMOVAL.
18. ALL UTILITY HANDHOLES OR VAULTS NOT SHOWN TO BE RELOCATED SHALL BE ADJUSTED TO PROPER ELEVATION.
19. TREES IMPACTING PROPOSED TRAIL SHALL BE TRIMMED AS DIRECTED BY ENGINEER AND SHALL BE CONSIDERED INCIDENTAL.

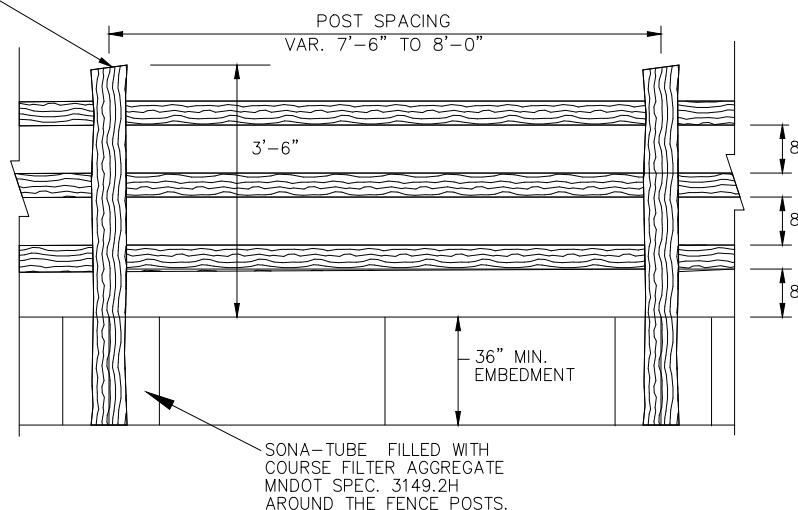
SIGNING SCHEDULE

 DENOTES STREET SIGN

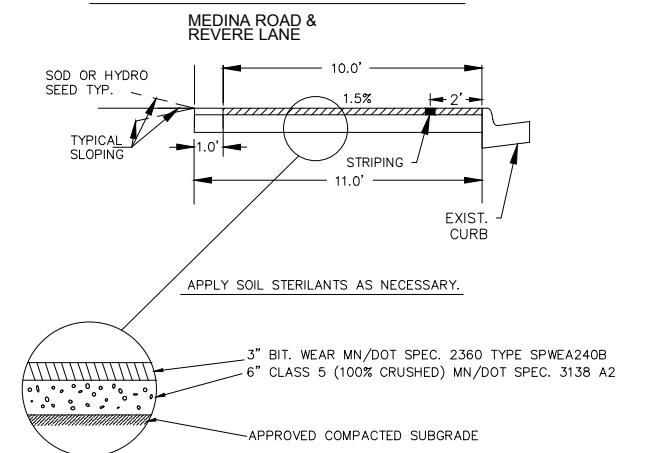
SIGN #	DESCRIPTION	NOTES
1	2 DIRECTION LARGE ARROW	LEAVE AS IS
2	SPEED/CITY of PLYMOUTH/NP	SALVAGE & INSTALL
3	PARKING REGULATIONS	SALVAGE & INSTALL
4	NP	SALVAGE & INSTALL
5	STOP/STREET	SALVAGE & INSTALL
6	SPEED/NP	SALVAGE & INSTALL
7	NP	SALVAGE & INSTALL
8	NP	SALVAGE & INSTALL
9	STOP/STREET	SALVAGE & INSTALL
10	SPEED/NP	SALVAGE & INSTALL
11	NP	SALVAGE & INSTALL
12	DIVIDED ROADWAY	SALVAGE & INSTALL
13	PED/SCHOOL	SALVAGE & INSTALL
14	SIGNAL AHEAD	SALVAGE & INSTALL
15	NP	SALVAGE & INSTALL
R1	GAS	SALVAGE & INSTALL
R2	RIGHT TURN LANE/FRONTAGE ROAD	SALVAGE & INSTALL
R3	DOUBLE ARROW	LEAVE AS IS

SPLIT RAIL FENCE

4"x4" (NOMINAL)
3 RAIL WHITE PLASTIC VINYL
SPLIT RAIL FENCE. MATERIALS
AND INSTALLATION TO BE
— APPROVED BY THE ENGINEER.



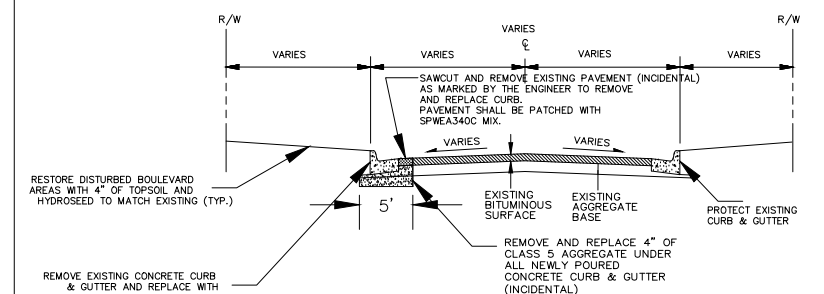
TRAIL CONSTRUCTION



NOTES:

1. THE PROFILE GRADE OF THE SIDEWALK SHALL NOT EXCEED THE GRADE OF THE ADJACENT ROADWAY UNLESS AUTHORIZED BY THE CITY ENGINEER.
2. THE TRAIL SHALL TIP TO OR AWAY FROM THE ROAD AS INDICATED ON THE PLAN.

CURB REPAIR

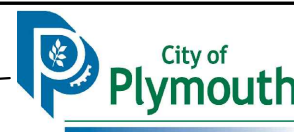


NO	DATE	BY	CKD	APPR	REVISION

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.

Signature: M. J. Payne
MICHAEL J. PAYNE

Date: 3/30/18 License #: 50484



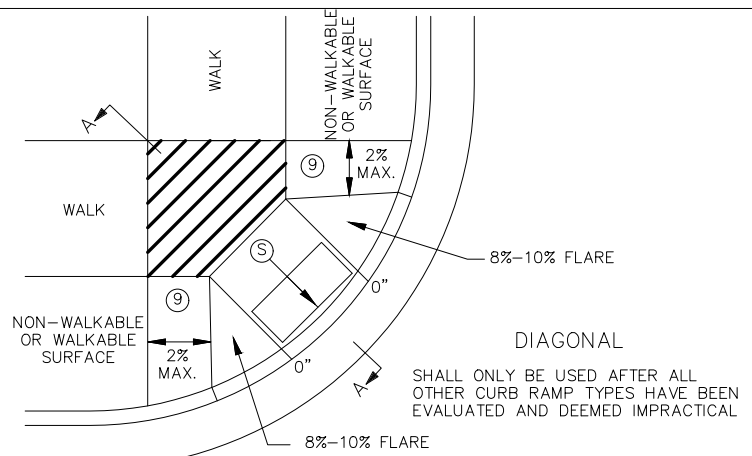
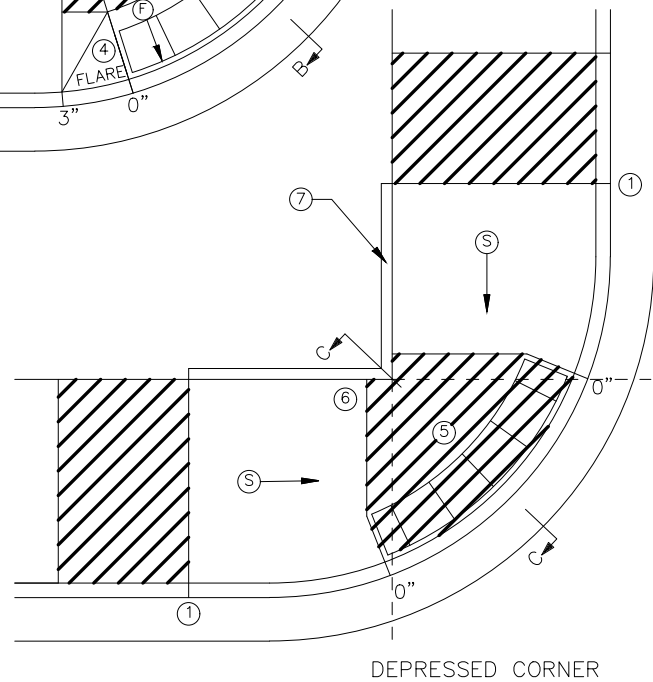
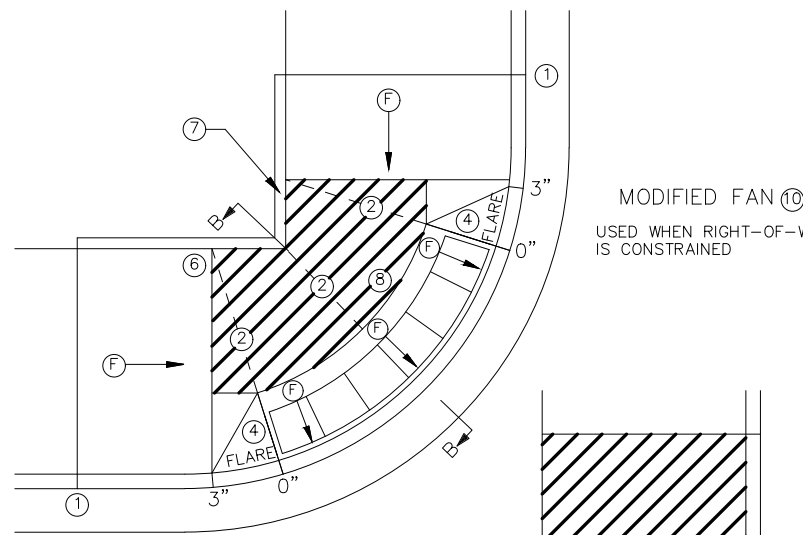
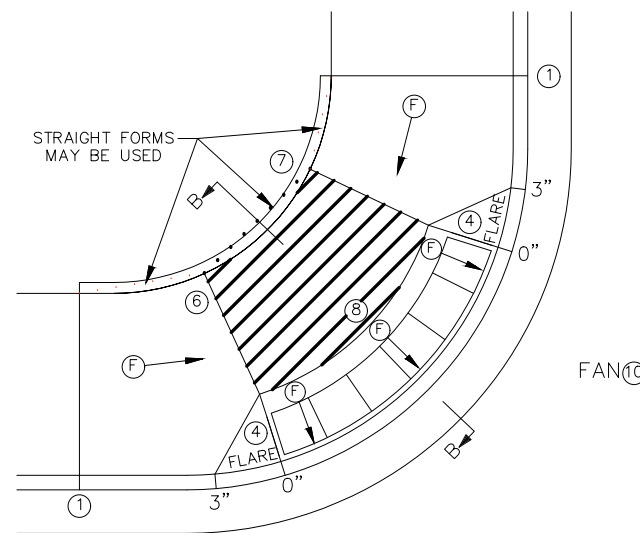
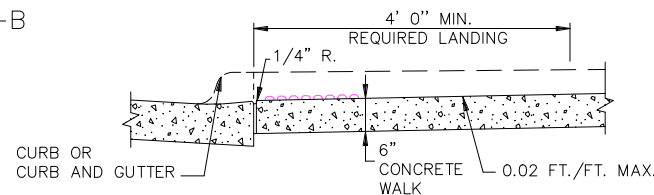
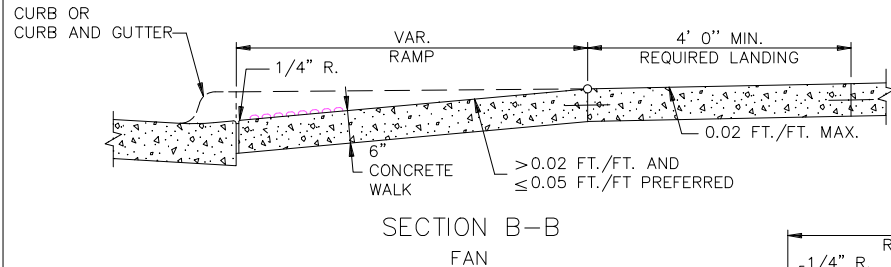
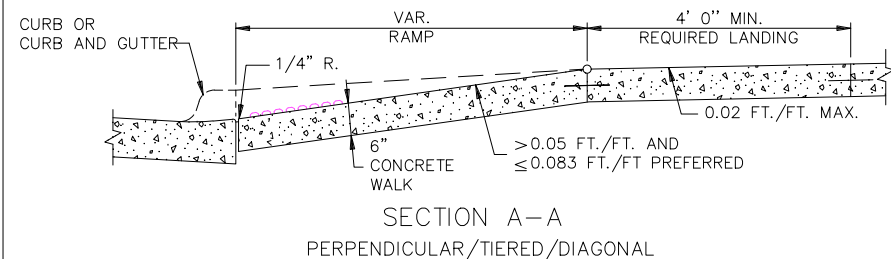
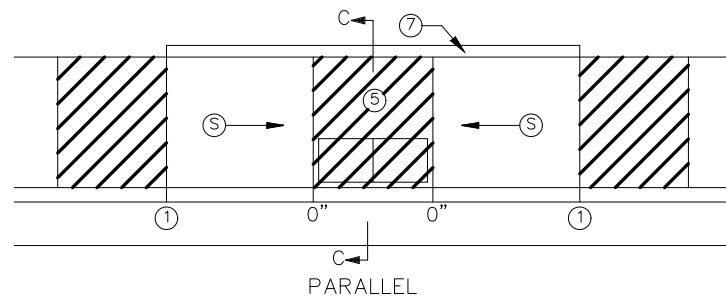
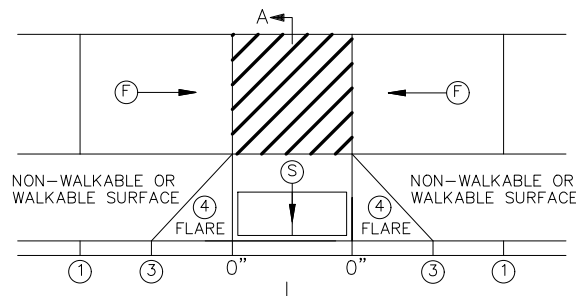
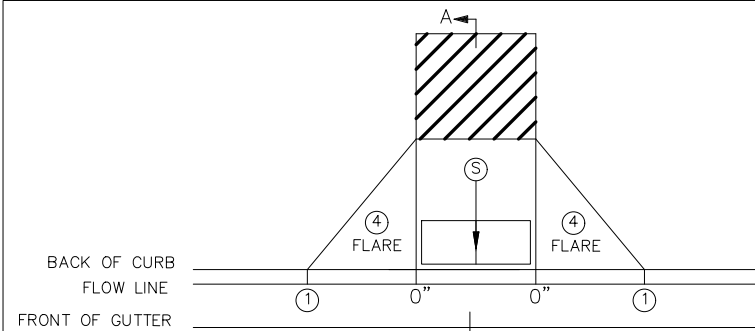
PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

GENERAL NOTES & DETAILS

STATE AID PROJECT NO. ####	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ####	DESIGNED BY M. PAYNE	11-17
CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	3-18
	REVIEWED BY M. PAYNE	3-18

SHEET
4
OF
31

SHEET
5
OF
31



NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMP THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.

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, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30' OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

- TO ENSURE INITIAL RAMP AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISIONS - PROSECUTION OF WORK (ADA).
- TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
- WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.
- ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMP TYPES. DETECTABLE WARNING SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER ENTIRE WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK. DETECTABLE WARNING SHOULD BE 6" LESS THAN THE PAR/TRAIL WIDTH. ARC LENGTH OF RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.
- RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
- 1 MATCH FULL HEIGHT CURB.
 - 2 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
 - 3 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.
 - 4 SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS, WHEN INITIAL LANDING IS AT FULL CURB HEIGHT.
 - 5 DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
 - 6 THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)
 - 7 WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
 - 8 A 7' MIN TOP RADIUS GRADE BREAK REQUIRED TO BE CONSTRUCTIBLE.
 - 9 PAVE FULL WALK WIDTH.
 - 10 "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.

LEGEND	
THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.	
(S)	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
(F)	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
(X)	LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.
X"	CURB HEIGHT

REVISION:

APPROVED: JANUARY 23, 2017

OPERATIONS 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.

Signature: MICHAEL J. PAYNE

Date: 3/30/18 License#: 50484



MINNESOTA DEPARTMENT OF TRANSPORTATION

Tom J. Payne

STATE DESIGN ENGINEER

REVISED:

APPROVED: 1-23-2017

PEDESTRIAN CURB RAMP DETAILS

STANDARD PLAN 5-297.250

1 OF 6

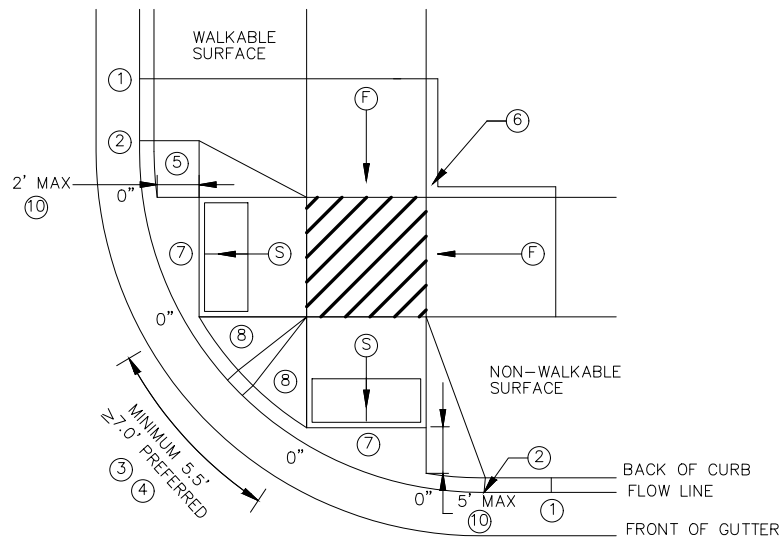
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PLYMOUTH, MINNESOTA

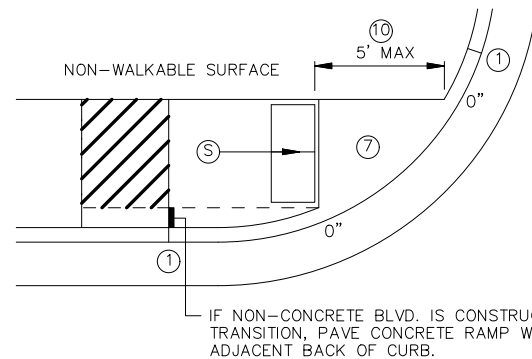
MEDINA ROAD & REVERE LANE TRAIL PROJECT

ADA DETAILS

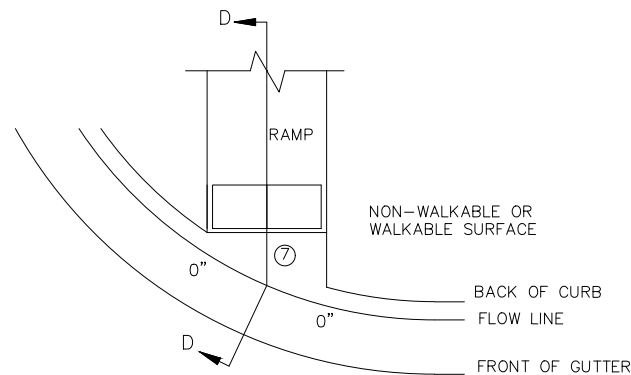
STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18	SHEET 6 OF 31
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	DATE 11-17	
CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	DATE 3-18	
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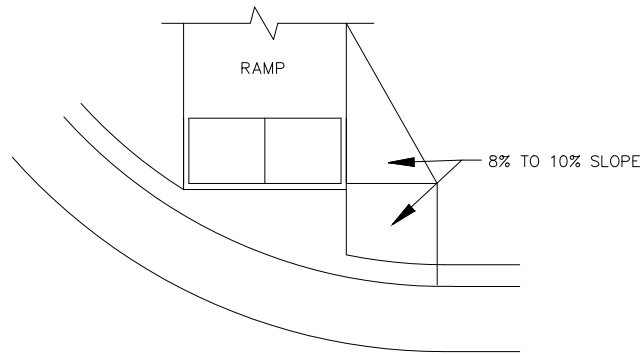
COMBINED DIRECTIONAL ⑨



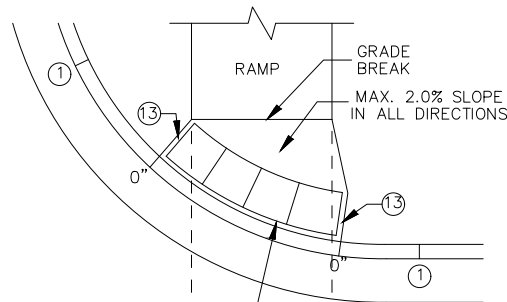
STANDARD ONE-WAY DIRECTIONAL ⑨



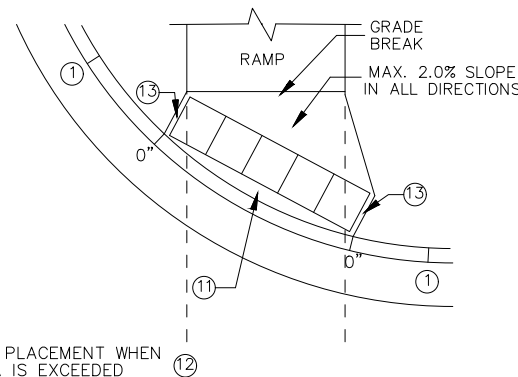
CURB FOR DIRECTIONAL RAMPS ⑭



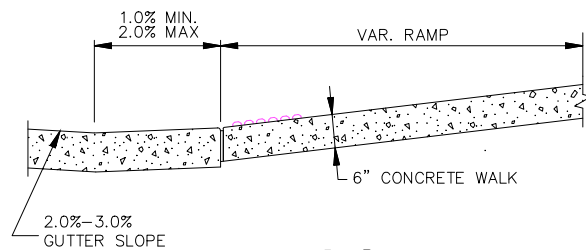
DIRECTIONAL RAMP WALKABLE FLARE



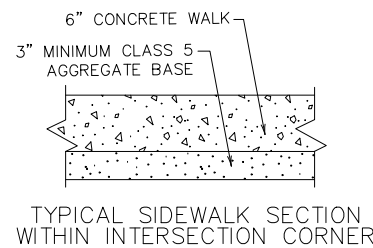
DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED



ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB



SECTION D-D



TYPICAL SIDEWALK SECTION WITHIN INTERSECTION CORNER

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

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, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER ENTIRE WIDTH OF SHARED-USE PATH AND THE ENTIRE PAR WIDTH OF THE WALK. DETECTABLE WARNING SHOULD BE 6" LESS THAN THE PAR/PATH WIDTH. ARC LENGTH OF RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES ⑩ & ⑪ FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

- ① MATCH FULL CURB HEIGHT.
- ② 3" HIGH CURB WHEN USING A 3' LONG RAMP
4" HIGH CURB WHEN USING A 4' LONG RAMP.
- ③ 3" MINIMUM CURB HEIGHT (5.5' MIN. DISTANCE REQUIRED BETWEEN DOMES)
4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).
- ④ THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.
- ⑤ WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHOULD BE USED. SEE THE DETAIL ON THIS SHEET.
- ⑥ GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
- ⑦ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
- ⑧ 8% TO 10% WALKABLE FLARE.
- ⑨ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
- ⑩ FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.
- ⑪ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.
- ⑫ FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNINGS SHALL COVER THE ENTIRE WIDTH OF THE WALK/PATH. THIS ENSURES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB TAPER OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.
- ⑬ THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑭ TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

- ⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- ⑥ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- ⑦ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.
- X" CURB HEIGHT

REVISION:

APPROVED: JANUARY 23, 2017

OPERATIONS ENGINEER

CURB FOR DIRECTIONAL RAMPS ⑭

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.

Signature: MICHAEL J. PAYNE

Date: 3/30/18 License#: 50484



PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

PEDESTRIAN CURB RAMP DETAILS

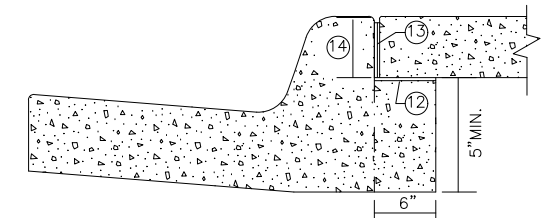
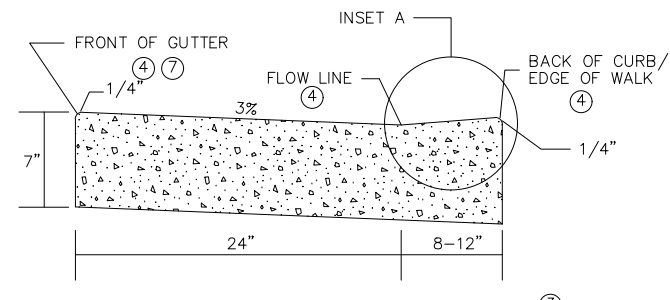
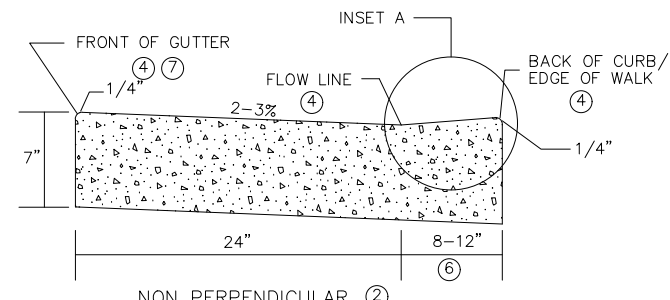
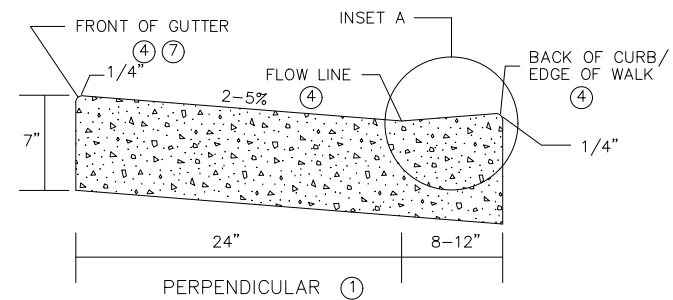
STANDARD PLAN 5-297.250 2 OF 6

ADA DETAILS

STATE AID PROJECT NO. ###
COUNTY PROJECT NO. ###
CITY PROJECT NO. PR189001.001 & PR 189001.002
DRAWN BY T. QUAST
DESIGNED BY M. PAYNE
CHECKED BY M. PAYNE
REVIEWED BY M. PAYNE
DATE 3-18
11-17
3-18
3-18

SHEET 7 OF 31

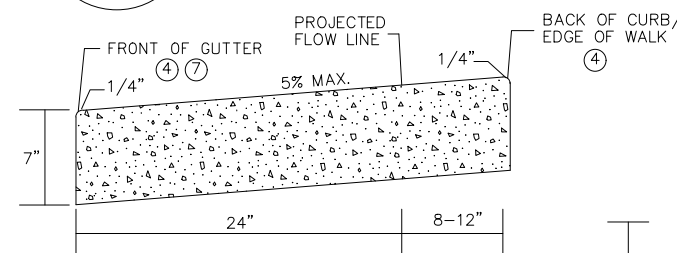
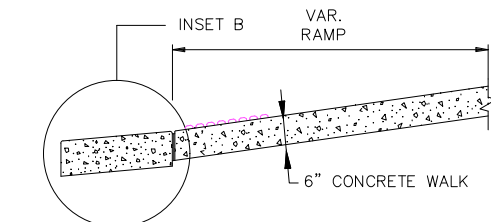
NO	DATE	BY	CKD	APPR	REVISION



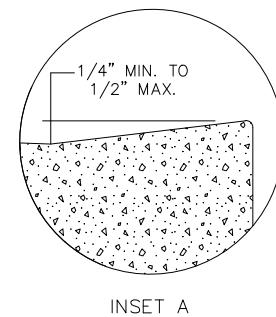
OPTIONAL SILL CURB WHEN SIDEWALK IS AT BACK OF CURB

CONCRETE SILL TO BE USED ONLY WHEN SPECIFIED IN THE PLAN.

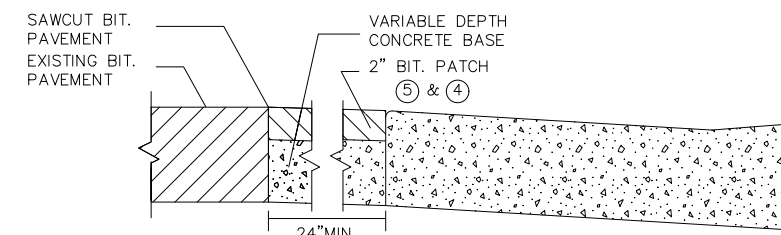
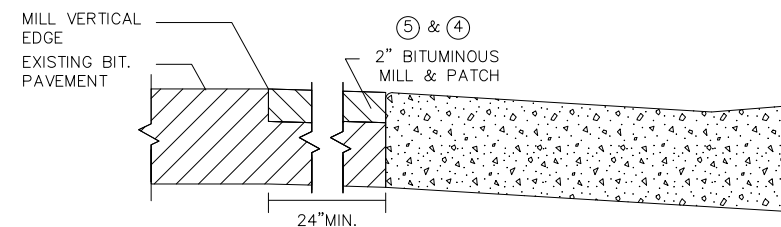
PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL



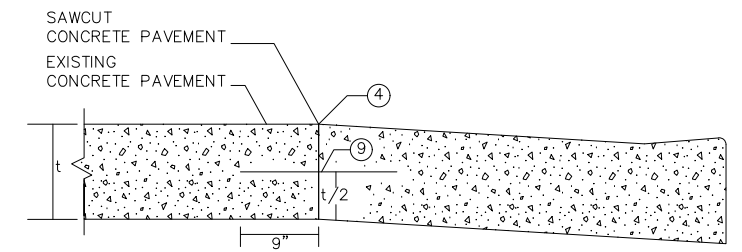
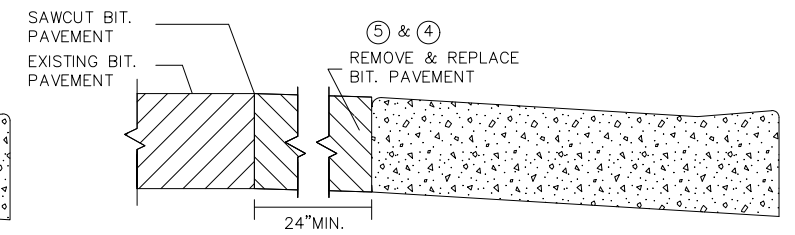
INSET B
OUTFLOW GUTTER ⑤



INSET A



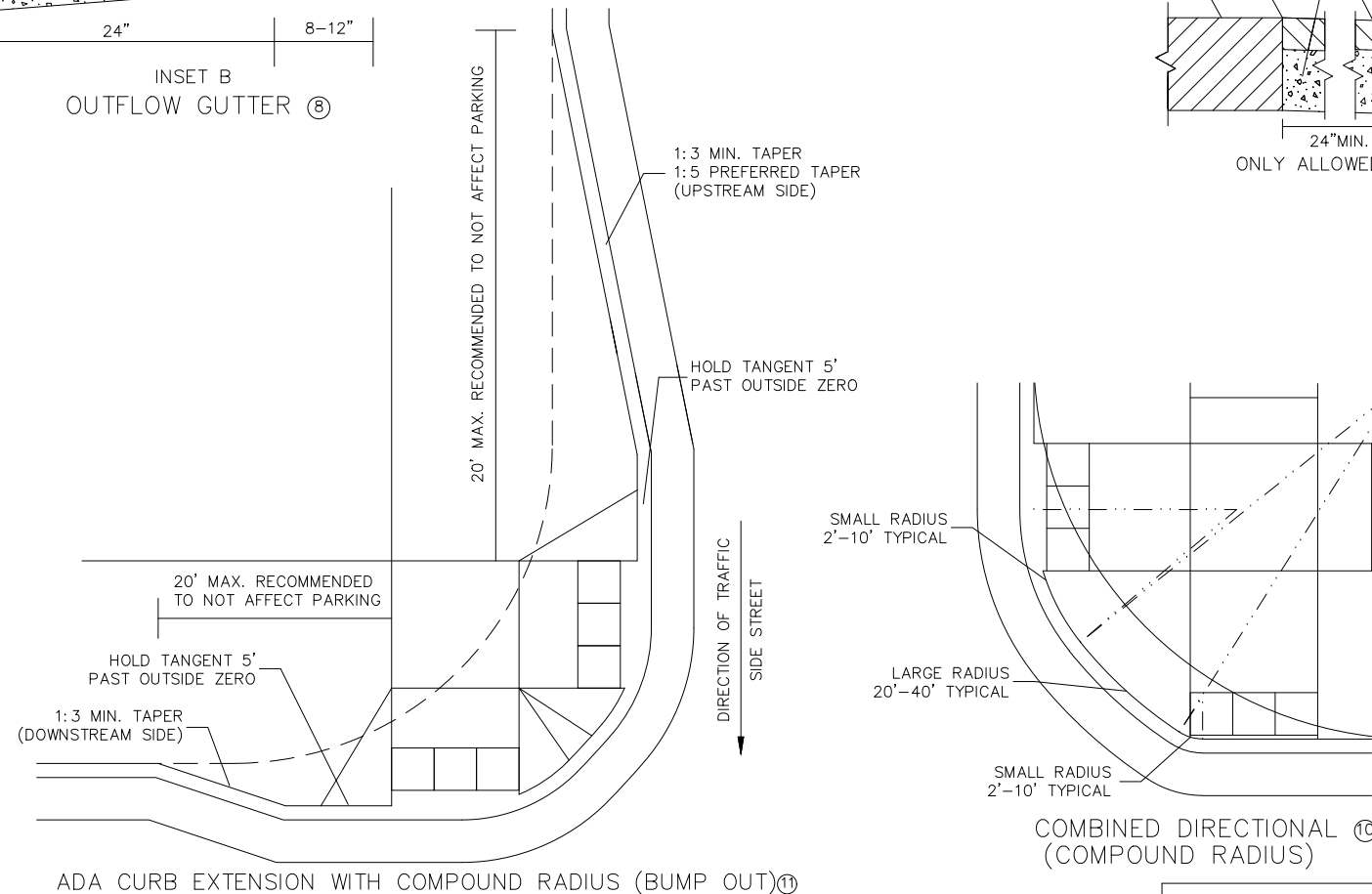
ONLY ALLOWED PER ENGINEER'S APPROVAL



PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER FOR USE ON CURB RAMP RETROFITS

NOTES:

- POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM.
- NO PONDING SHALL BE PRESENT IN THE PAR.
- ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.
- ① 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.
- ② FOR USE AT CURB RAMPS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS & DEPRESSED CORNERS.
- ③ BEGIN GUTTER SLOPE TRANSITION 10' OUTSIDE OF ALL CURB RAMPS.
- ④ THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4\".
- 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. SEE SHEET 2 FOR DIRECTIONAL CURB SLOPE REQUIREMENTS.
- ⑦ TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. TOP 1.5\" OF THE GUTTER FACE MUST BE A FORMED EDGE. PAR GUTTER SHALL NOT BE OVERLAID.
- ⑧ SHOULD BE USED AT VERTICALLY CONSTRAINED AREAS WHEN AT A DRAINAGE HIGH POINT OR SUPER ELEVATED ROADWAY SEGMENTS.
- ⑨ DRILL AND GROUT NO. 4 EPOXY-COATED 18\" LONG TIE BARS AT 30\" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT 1\" MINIMUM FROM ALL JOINTS.
- ⑩ HELPS PROVIDE TWO SEPARATE RAMPS, REDUCES THE DOME SETBACK LENGTH AND MINIMIZES DIRECTIONAL CURB. THIS RADIUS DESIGN CLOSELY FOLLOWS THE TURNING VEHICLE PATH WHILE OPTIMIZING CURB RAMP LENGTH.
- ⑪ CURB EXTENSIONS SHOULD BE USED IN VERTICALLY CONSTRAINED AREAS, USUALLY IN DOWNTOWN ROADWAY SEGMENTS WHERE ON-STREET PARKING IS AVAILABLE. CURB EXTENSIONS SHOULD BE CONSIDERED FOR APS INTERSECTIONS WHERE SPACE IS LIMITED. PUSH BUTTONS MUST MEET APS CRITERIA AS DESCRIBED IN THE PUSH BUTTON LOCATION DETAIL SHEET.
- ⑫ PLACE BOND BREAKER BETWEEN WALK AND TOP OF SILL.
- ⑬ 1/2\" PREFORMED JOINT FILLER PER MNDOT SPEC. 3702.
- ⑭ DIMENSION TO BE SAME AS SIDEWALK THICKNESS, 4\" MIN.



REVISION:

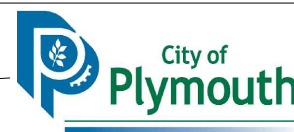
APPROVED: JANUARY 23, 2017

OPERATIONS ENGINEER

DIRECTION OF TRAFFIC
MAIN STREET

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.

Signature: *Michael J. Payne*
Date: 3/30/18 License#: 50484



REVISED:

APPROVED:

1-23-2017

PEDESTRIAN CURB RAMP DETAILS

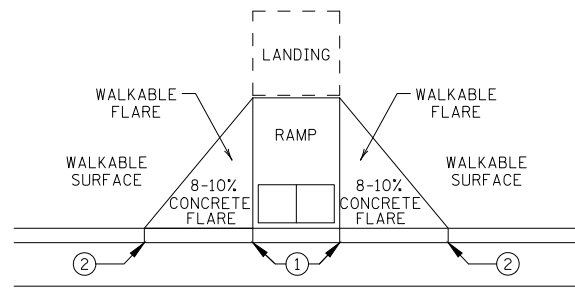
STANDARD PLAN 5-297.250 3 OF 6

NO	DATE	BY	CKD	APPR	REVISION

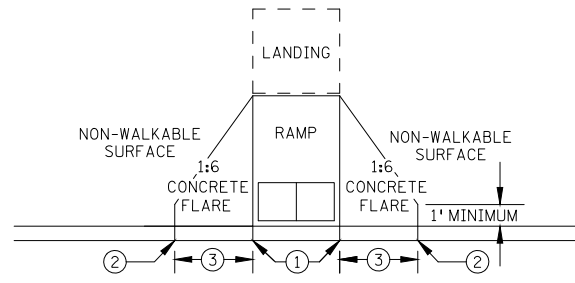
PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

ADA DETAILS

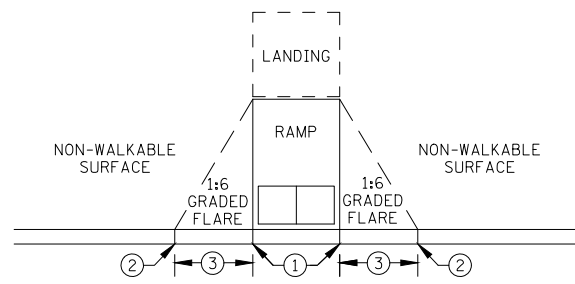
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###	T. QUAST	3-18	8
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###	M. PAYNE	11-17	31
CITY PROJECT NO.	CHECKED BY	DATE	
PR189001.001 & PR 189001.002	M. PAYNE	3-18	
	REVIEWED BY	DATE	
	M. PAYNE	3-18	



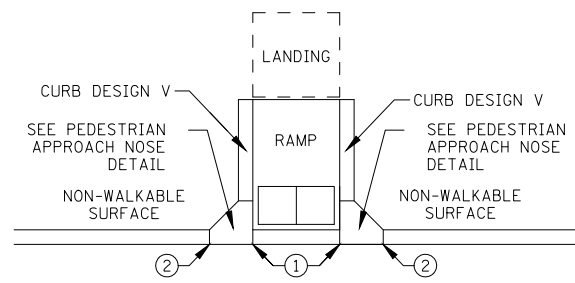
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE



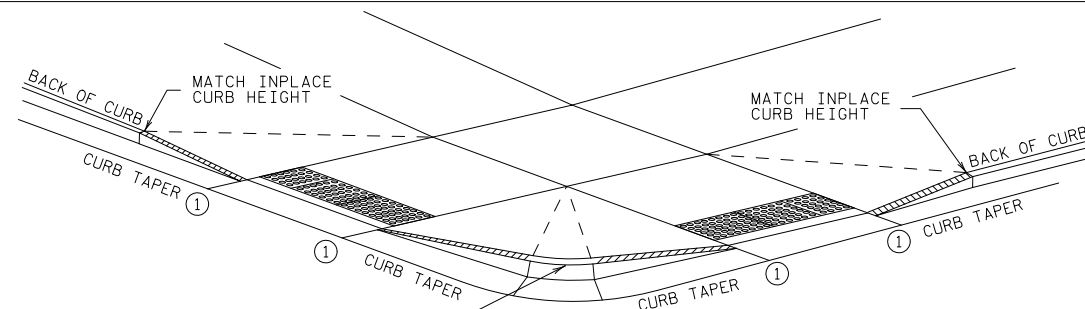
GRADED FLARES



RETURNED CURB ⑤

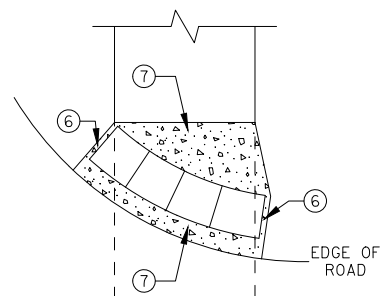
TYPICAL SIDE TREATMENT OPTIONS ④ ⑪

REVISION:
APPROVED: JANUARY 23, 2017
OPERATIONS ENGINEER

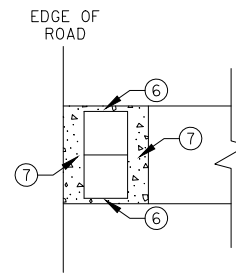


3" MINIMUM CURB HEIGHT, 4" PREFERRED
(MEASURED AT FRONT FACE OF CURB)
FOR A MIN. 6" LENGTH (MEASURED ALONG FLOW LINE)

DETECTABLE EDGE WITH ⑧
CURB AND GUTTER

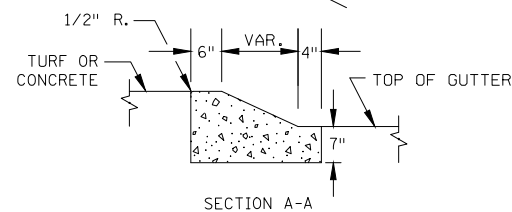
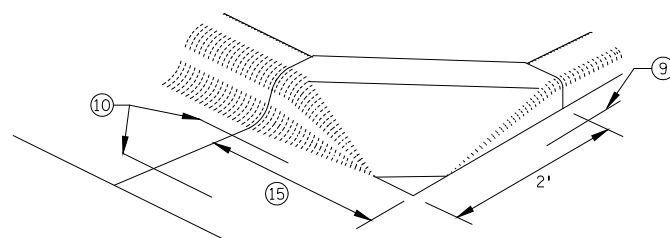


RADIAL DETECTABLE WARNING

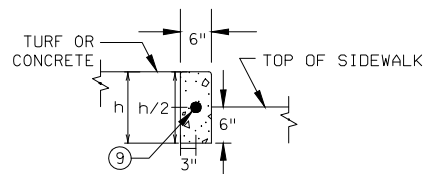


RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

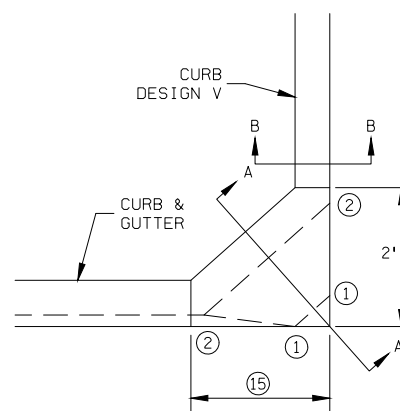


SECTION A-A



SECTION B-B

PEDESTRIAN APPROACH
NOSE DETAIL
(FOR RETURNED CURB
SIDE TREATMENT)



REVISED:

APPROVED:

1-23-2017

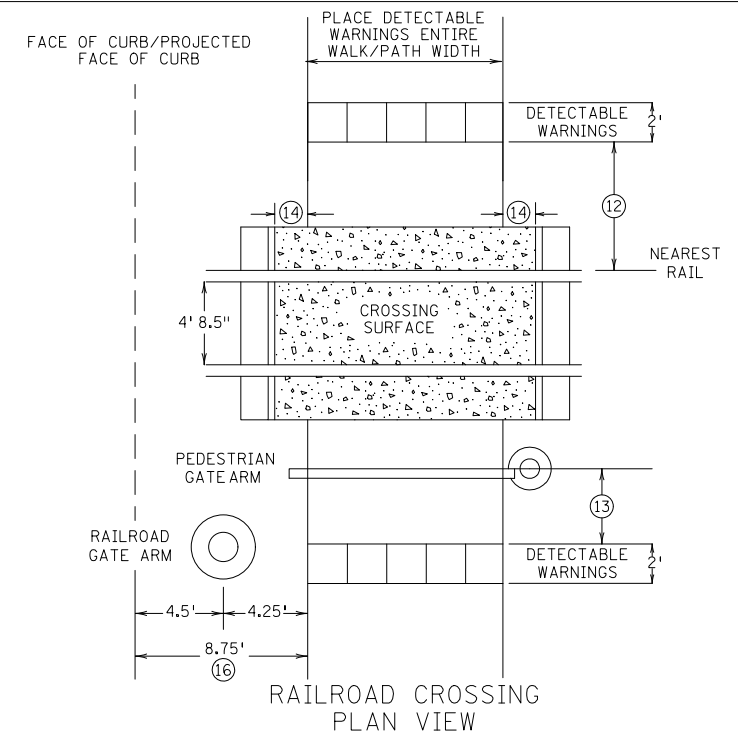
PEDESTRIAN CURB RAMP DETAILS

STANDARD PLAN 5-297.250

4 OF 6

NOTES:

- SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.
- A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.
- CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.
- ① 0" CURB HEIGHT.
- ② FULL CURB HEIGHT.
- ③ 2' FOR 4" HIGH CURB AND 3' FOR 6" HIGH CURB.
- ④ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED 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.
- ⑤ TYPICALLY USED FOR MEDIANS AND ISLANDS.
- ⑥ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" MAX. BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑦ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF BITUMINOUS ROADWAY AND/OR BITUMINOUS SHARED-USE PATH TO PROVIDE VISUAL CONTRAST.
- ⑧ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.
- ⑨ DRILL AND GROUT 1 - NO. 4 12" LONG REINFORCEMENT BAR (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE V CURB.
- ⑩ DRILL AND GROUT 2 - NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE CURB AND GUTTER.
- ⑪ SIDE TREATMENT EXAMPLES SHOWN ARE WHEN THE INITIAL LANDING IS APPROXIMATELY LEVEL WITH THE FULL HEIGHT CURB (I.E. 6" LONG RAMP FOR 6" HIGH CURB). WHEN THE INITIAL LANDING IS MORE THAN 1" BELOW FULL HEIGHT CURB REFER TO SHEETS 1 & 2 TO MODIFY THE CURB HEIGHT TAPERS AND MAINTAIN POSITIVE BOULEVARD DRAINAGE.
- ⑫ NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12' MINIMUM TO 15' MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.
- ⑬ WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM. THIS CRITERIA GOVERNS OVER NOTE ⑫.
- ⑭ CROSSING SURFACE SHALL EXTEND 2' MINIMUM PAST THE OUTSIDE EDGE OF WALK OR SHARED-USE PATH.
- ⑮ 3' FOR MEDIANS AND SPLITTER ISLANDS. NOSE CAN BE REDUCED TO 2' ON FREE RIGHT ISLANDS.
- ⑯ SIDEWALK TO BE PLACED 8.75' MIN. FROM THE FACE OF CURB/PROJECTED FACE OF CURB. THIS ENSURES MIN. CLEARANCE BETWEEN THE SIDEWALK AND GATE ARM COUNTERWEIGHT SUPPORTS.



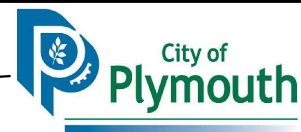
RAILROAD CROSSING
PLAN VIEW

NO	DATE	BY	CKD	APPR	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.

Signature: *Michael J. Payne*

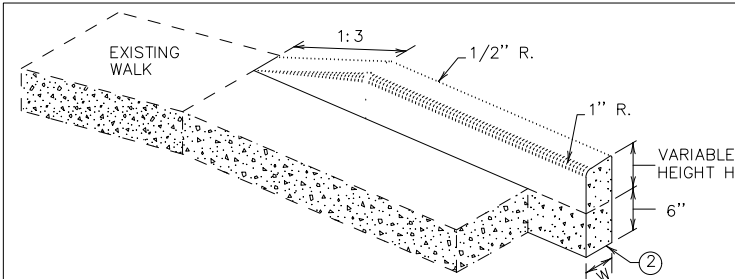
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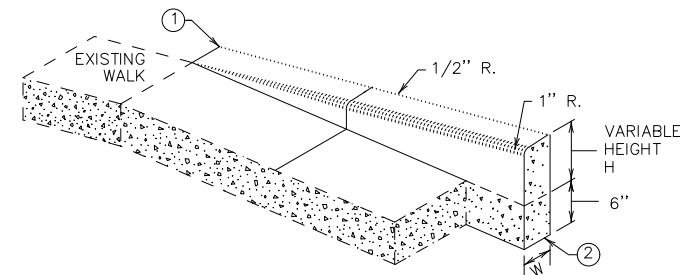
PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

ADA DETAILS

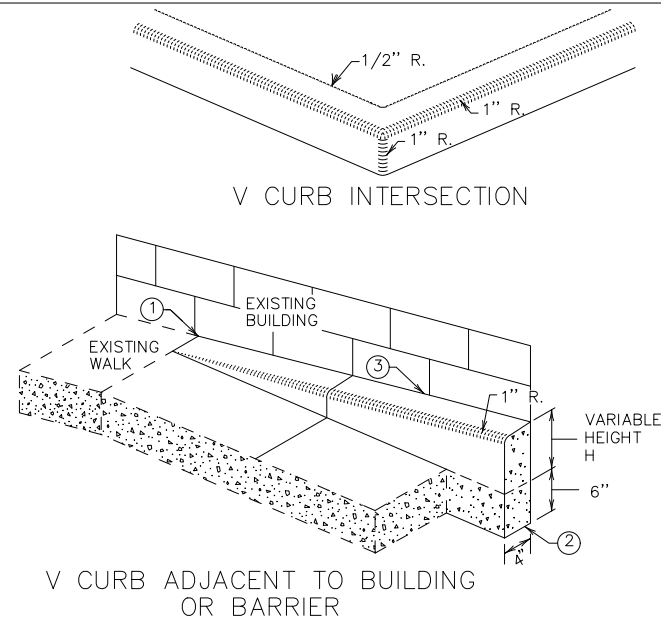
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	REVIEWED BY M. PAYNE	3-18	



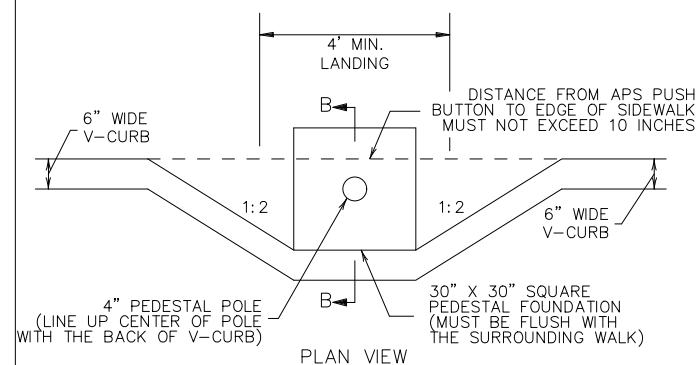
V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS



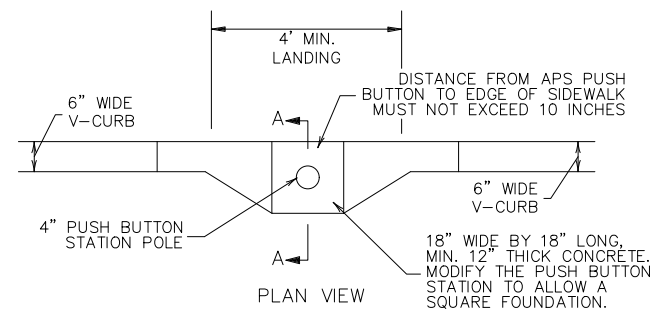
V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS



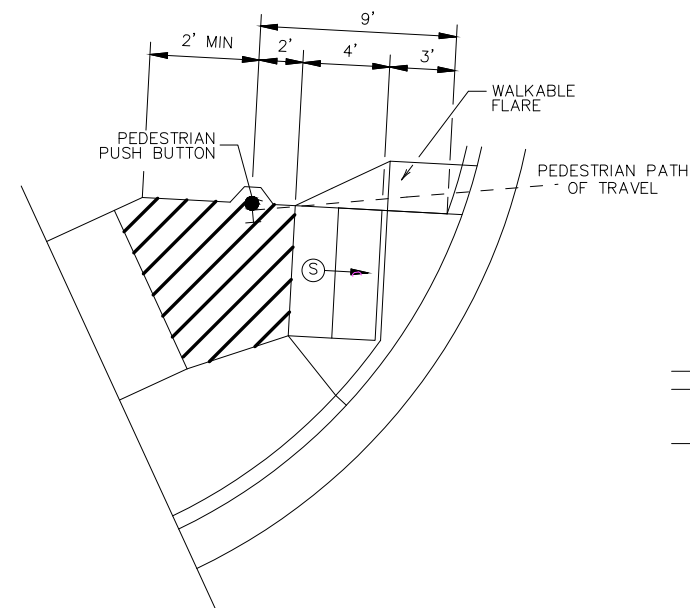
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
6"	4"
- 6"	6"



SECTION B-B
SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



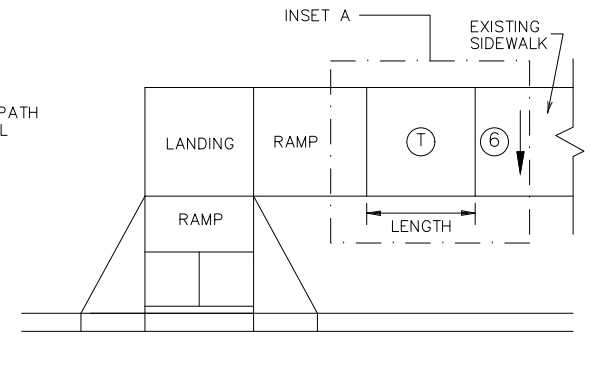
SECTION A-A
PUSH BUTTON STATION (V-CURB)



SEMI-DIRECTIONAL RAMP (3,4,9)

3' DOME SETBACK, 4' LONG RAMP AND
PUSH BUTTON 9' FROM THE BACK OF CURB

PRIMARILY USED FOR APS APPLICATIONS
WHERE THE PAR DOES NOT CONTINUE PAST
THE PUSH BUTTON (DEAD-END SIDEWALK)



INSET A
TRANSITION PANEL (4,5)

NOTES:

A WALKABLE FLARE IS AN 8-10% CONCRETE FLARE THAT IS REQUIRED WHEN THE FLARE IS ADJACENT TO A WALKABLE SURFACE, OR WHEN THE PEDESTRIAN PATH OF TRAVEL OF A PUSH BUTTON TRAVERSES THE FLARE.

ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.

WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.

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 THE MAX. RATE OF CROSS SLOPE TRANSITIONING IS 1' LINEAR FOOT OF SIDEWALK PER HALF PERCENT CROSS SLOPE. WHEN PAR WIDTH IS GREATER THAN 6' OR THE RUNNING SLOPE IS GREATER THAN 5%, DOUBLE THE CALCULATED TRANSITION LENGTH.

⑤ TRANSITION PANEL(S) ARE TO ONLY BE USED AFTER THE RAMP, OR IF NEEDED, LANDING ARE AT THE FULL CURB HEIGHT (TYPICAL SECTION).

⑥ EXISTING CROSS SLOPE GREATER THAN 2.0%.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT, IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

④ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX. 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.

① TRANSITION PANEL(S) - TO BE USED FOR TRANSITIONING THE CROSS-SLOPE OF A RAMP TO THE EXISTING WALK CROSS-SLOPE. RATE OF TRANSITION SHOULD BE 0.5% PER 1 LINEAR FOOT OF WALK. SEE THIS SHEET FOR ADDITIONAL INFORMATION.

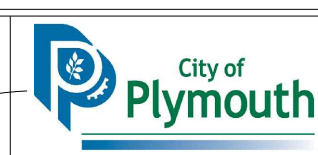
REVISION:
APPROVED: JANUARY 23, 2017
OPERATIONS ENGINEER

MINNESOTA DEPARTMENT OF TRANSPORTATION	REVISOR:	APPROVED:
		1-23-2017
		STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS	
STANDARD PLAN 5-297.250	5 OF 6

NO	DATE	BY	CKD	APPR	REVISION

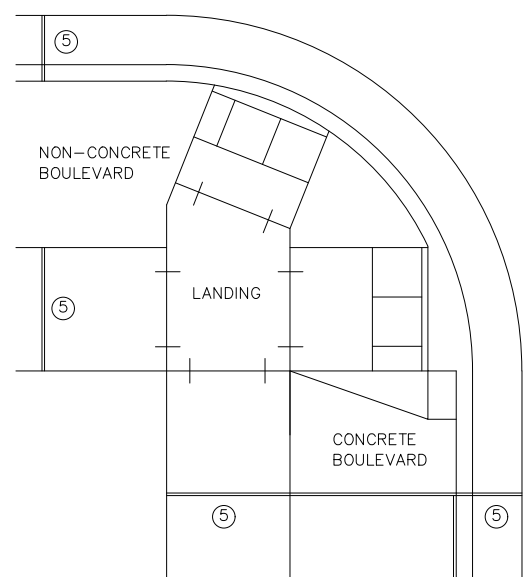
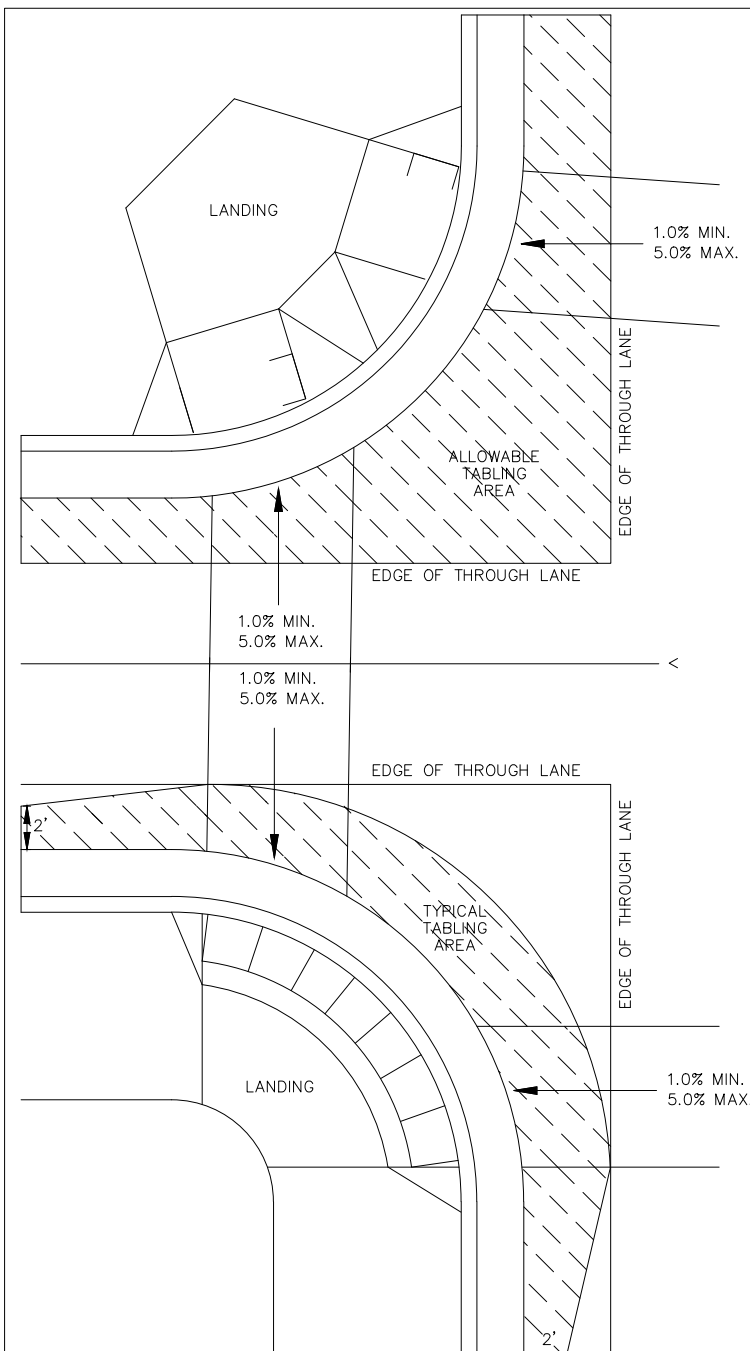
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Signature: <i>Michael J. Payne</i>
Date: 3/30/18 License#: 50484



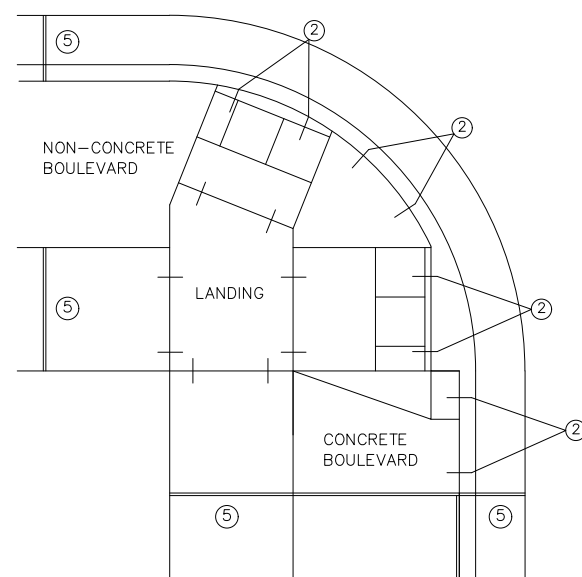
PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

ADA DETAILS

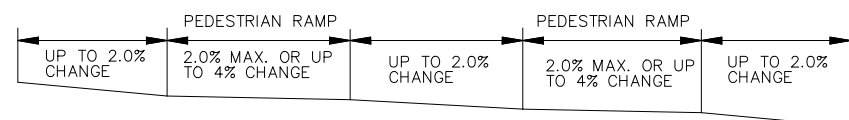
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###	T. QUAST	3-18	10
COUNTY PROJECT NO.	DESIGNED BY	DATE	OF
###	M. PAYNE	11-17	31
CITY PROJECT NO.	CHECKED BY	DATE	
PR189001.001 & PR 189001.002	M. PAYNE	3-18	
	REVIEWED BY	DATE	
	M. PAYNE	3-18	



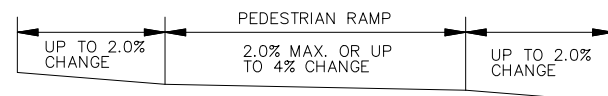
EXPANSION MATERIAL PLACEMENT FOR CONCRETE AND BITUMINOUS ROADWAYS



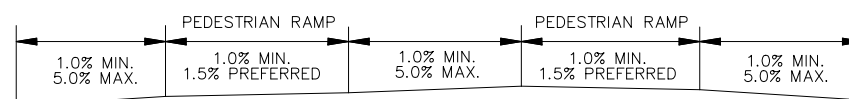
OPTIONAL CURB LINE REINFORCEMENT PLACEMENT ON BITUMINOUS ROADWAYS ④



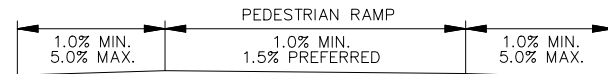
FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS



FLOW LINE PROFILE "TABLE" - FAN



FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS



FLOW LINE PROFILE RAISE - FAN

CURB LINE AND ROAD CROSSING ADJUSTMENTS

"TABLING" OF CROSSWALKS MEANS MAINTAINING LESS THAN 2% CROSS SLOPE WITHIN A CROSSWALK. IS REQUIRED WHEN A ROADWAY IS IN A STOP OR YIELD CONDITION AND THE PROJECT SCOPE ALLOWS.

RECONSTRUCTION PROJECTS: ON FULL PAVEMENT REPLACEMENT PROJECTS "TABLING" OF ENTIRE CROSSWALK SHALL OCCUR WHEN FEASIBLE.

MILL & OVERLAY PROJECTS: "TABLING" OF FLOW LINES, IN FRONT OF THE PEDESTRIAN RAMP, IS REQUIRED WHEN THE EXISTING FLOW LINE IS GREATER THAN 2%. WARPING OF THE BITUMINOUS PAVEMENT CAN NOT EXTEND INTO THE THROUGH LANE. TABLE THE FLOW LINE TO 2% OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA;

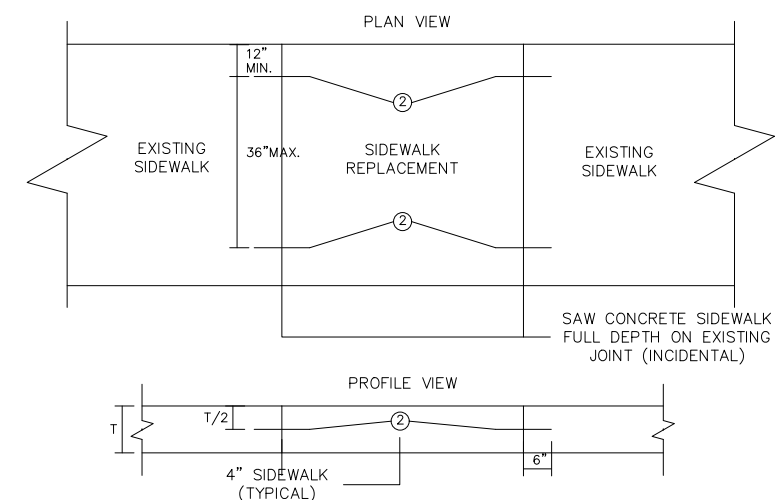
- 1) 1.0% MIN. CROSS-SLOPE OF THE ROAD
- 2) 5.0% MAX. CROSS-SLOPE OF THE ROAD
- 3) "TABLE" FLOW LINE UP TO 4% CHANGE FROM EXISTING SLOPE IN FRONT OF PEDESTRIAN RAMP
- 4) UP TO 2% CHANGE IN FLOW LINE FROM EXISTING SLOPE BEYOND THE PEDESTRIAN CURB RAMP

STAND-ALONE ADA RETROFITS: FOLLOW MILL & OVERLAY CRITERIA ABOVE HOWEVER ALL PAVEMENT WARPING IS DONE WITH BITUMINOUS PATCHING ON BITUMINOUS ROADWAYS AND FULL-DEPTH APRON REPLACEMENT ON CONCRETE ROADWAYS.

RAISING OF CURB LINES SHOULD OCCUR IN VERTICALLY CONSTRAINED AREAS. RAISE THE CURB LINES ENOUGH TO ALLOW COMPLIANT RAMPS OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA;

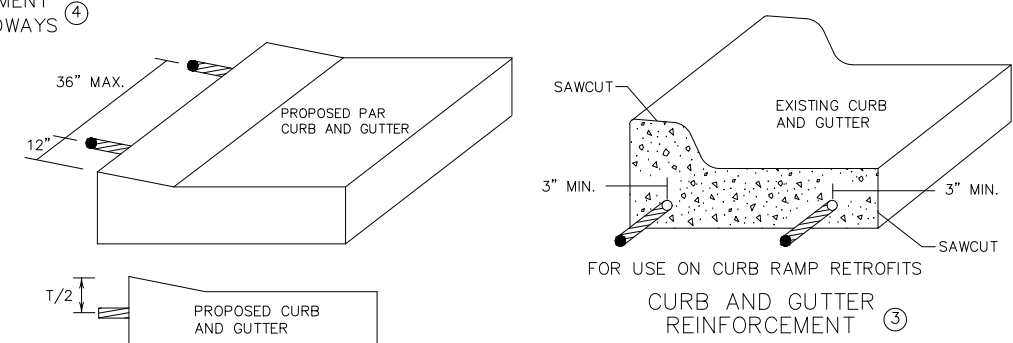
- 1) 1.0% MIN. AND 5.0% MAXIMUM CROSS-SLOPE OF THE ROAD
- 2) 1.0% MIN. FLOW LINE (ON EITHER SIDE OF PEDESTRIAN RAMP) TO MAINTAIN POSITIVE DRAINAGE
- 3) 5.0% RECOMMENDED MAX. FLOW LINE
- 4) LONGITUDINAL THROUGH LANE ROADWAY TAPERS SHOULD BE 1" VERTICAL PER 15' HORIZONTAL

REVISION:
APPROVED: JANUARY 23, 2017
OPERATIONS ENGINEER

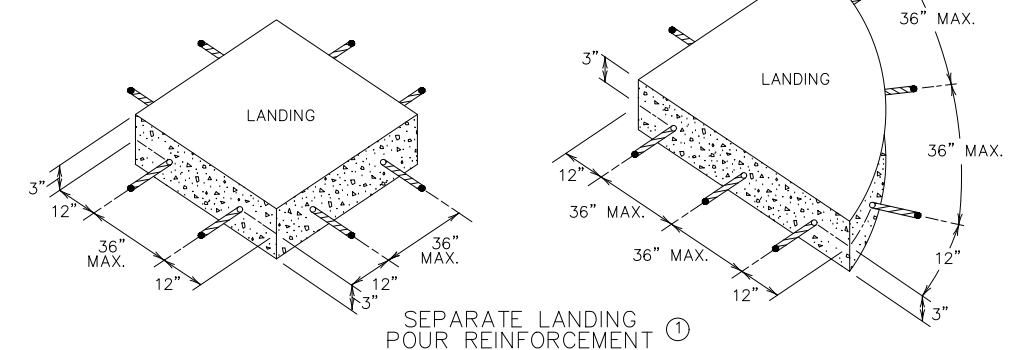


OPTIONAL SIDEWALK REINFORCEMENT

SIDEWALK REINFORCEMENT TO BE USED ONLY WHEN SPECIFIED IN THE PLAN.



OPTIONAL CURB LINE REINFORCEMENT DETAILS ②④



SEPARATE LANDING POUR REINFORCEMENT ①

NOTES:

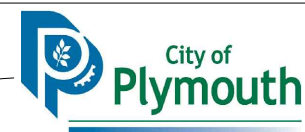
- ① TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET FOR ALL SEPARATELY POURED INITIAL LANDINGS.
- ② DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS AT 36" MAXIMUM CENTER TO CENTER (EPOXY COATED). BARS TO BE ADJUSTED TO MATCH RAMP GRADE.
- ③ DRILL AND GROUT 2 - NO. 4 X 12" LONG REINFORCEMENT BARS (EPOXY COATED). REINFORCEMENT REQUIRED FOR ALL CONSTRUCTION JOINTS WITHIN RADIUS.
- ④ THIS OPTIONAL CURB LINE REINFORCEMENT DETAIL SHOULD ONLY BE USED ON BITUMINOUS ROADWAYS WHEN SPECIFIED IN THE PLAN.
- ⑤ 1/2 IN. PREFORMED JOINT FILLER MATERIAL PER MNDOT SPEC. 3702.

MINNESOTA DEPARTMENT OF TRANSPORTATION
REVISOR:
APPROVED: 1-23-2017
STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS
STANDARD PLAN 5-297.250 6 OF 6

NO	DATE	BY	CKD	APPR	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.
Signature: MICHAEL J. PAYNE
Date: 3/30/18 License#: 50484

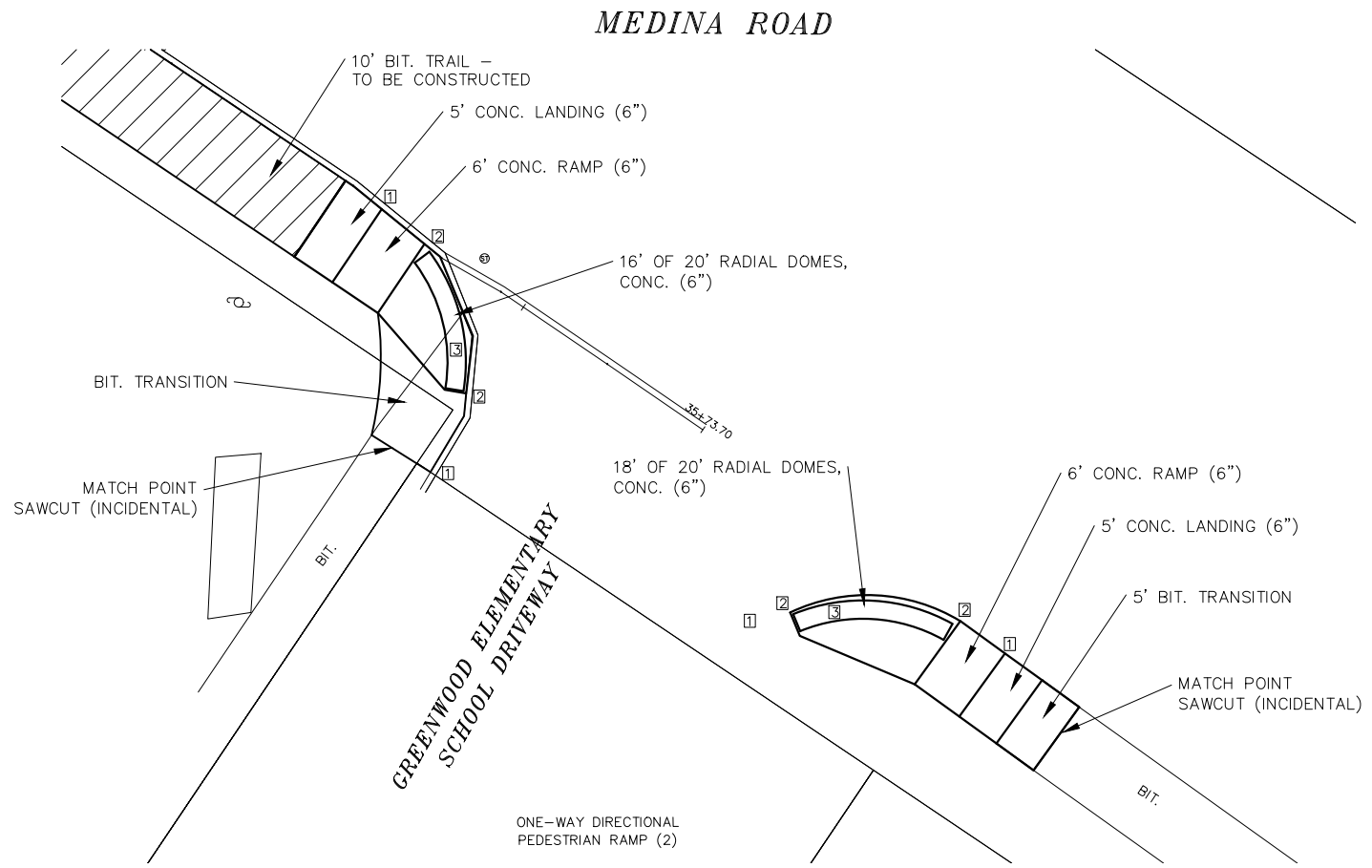


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

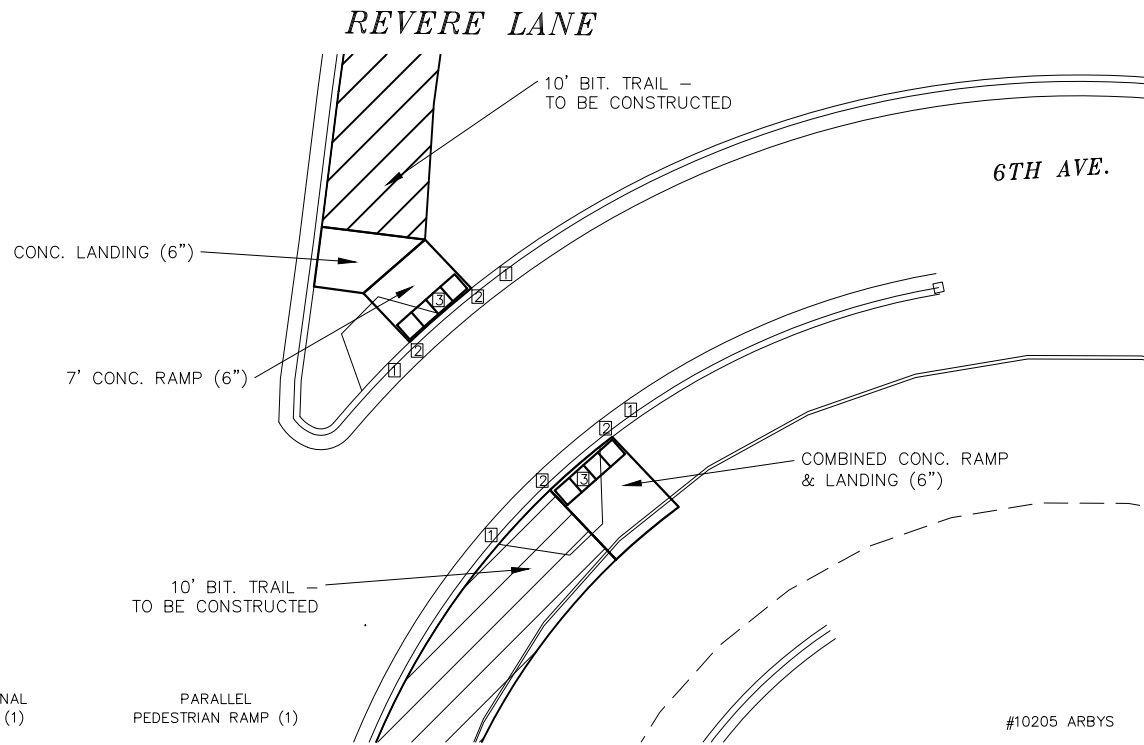
ADA DETAILS

STATE AID PROJECT NO.	DRAWN BY	DATE	SHEET
###	T. QUAST	3-18	11
COUNTY PROJECT NO.	DESIGNED BY	DATE	OF
###	M. PAYNE	11-17	31
CITY PROJECT NO.	CHECKED BY	DATE	
PR189001.001 & PR 189001.002	M. PAYNE	3-18	
	REVIEWED BY	DATE	
	M. PAYNE	3-18	

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FULL CURB HEIGHT ①
0" CURB HEIGHT ②
TRUNCATED DOMES ③



ALL PEDESTRIAN RAMPS SHALL BE CONSTRUCTED PRIOR TO BITUMINOUS PAVING OF THE TRAIL

ALL CURBS, DOME, RAMP AND LANDING PIECES SHALL BE POURED SEPARATELY. FOLLOW SIDEWALK REINFORCEMENT DETAIL, SHEET 10, MNDOT STANDARD PLAN 5-297.250 SHEET 6 OF 6.

ALL PEDESTRIAN RAMPS SHALL BE CONSTRUCTED TO AMERICANS WITH DISABILITY ACT STANDARDS (ADA) UNLESS OTHERWISE NOTED

NOTE: ALL DISTANCES PROVIDED ARE APPROXIMATE AND WILL BE SET IN THE FIELD BY THE ENGINEER

NOTE: GRADE ALL LAWNS / BOULEVARDS AS DIRECTED BY ENGINEER (INCIDENTAL)

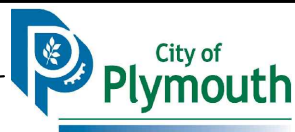
THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, WATER, ETC., ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT GOPHER STATE ONE-CALL BEFORE COMMENCING ANY EXCAVATION.

NO	DATE	BY	CKD	APPR	REVISION

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Date: 3/30/18 License#: 50484

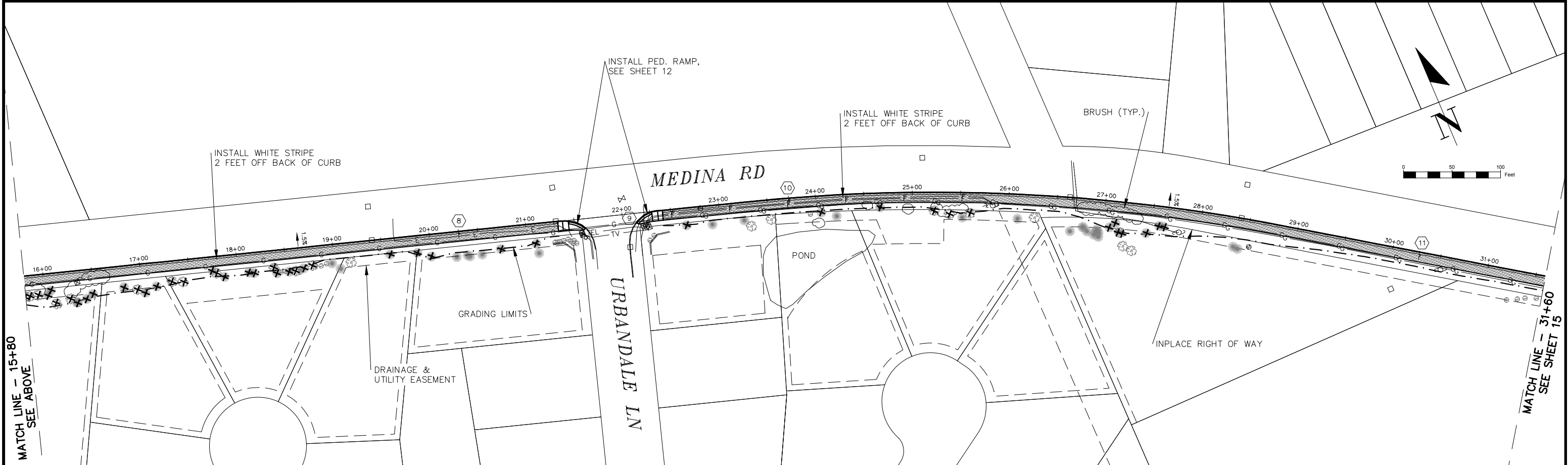
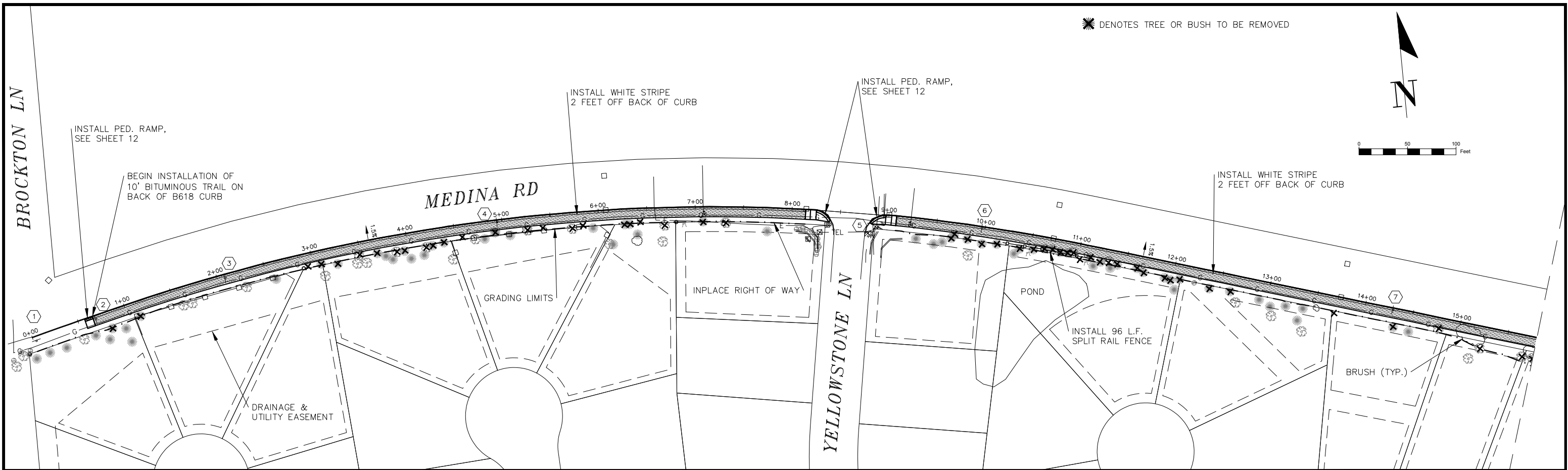


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

PEDESTRIAN RAMP PLANS

STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	11-17
CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	3-18
	REVIEWED BY M. PAYNE	3-18

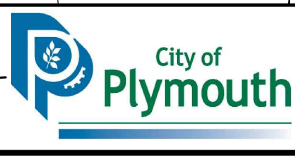
SHEET
13
OF
31



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Signature: *M. Payne*
 MICHAEL J. PAYNE
 Date: 3/30/18 License#: 50484

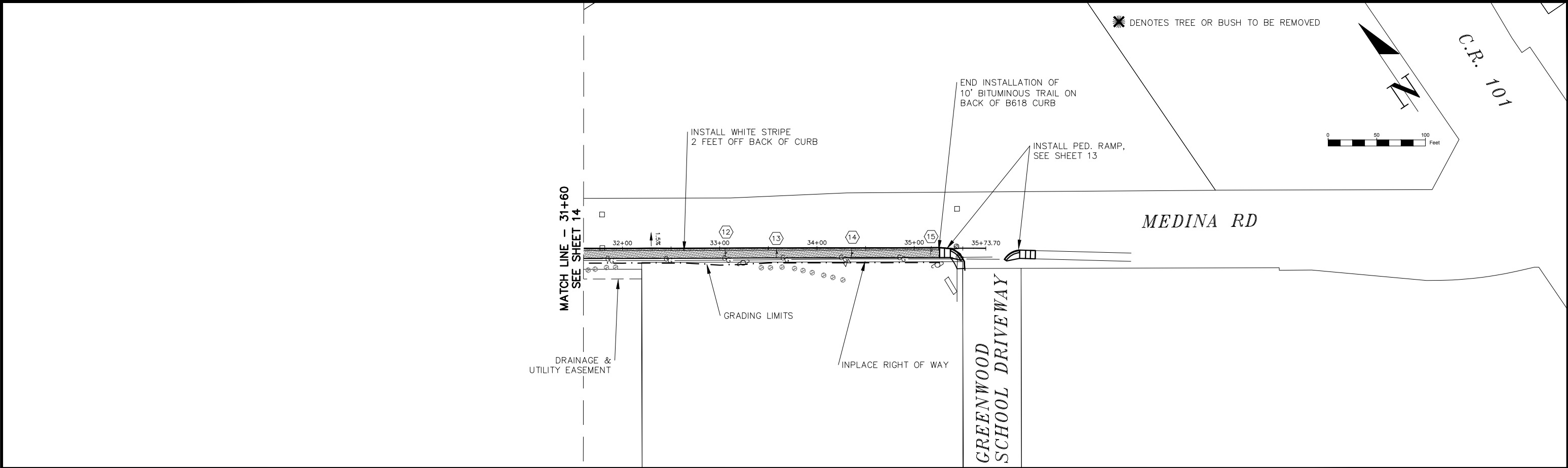


PLYMOUTH, MINNESOTA
 MEDINA ROAD & REVERE LANE
 TRAIL PROJECT

STA. 0+00 TO 31+60
 MEDINA ROAD TRAIL PLAN

STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	11-17
CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	3-18
	REVIEWED BY M. PAYNE	3-18

SHEET
 14
 OF
 31



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Date: 3/30/18 License#: 50484

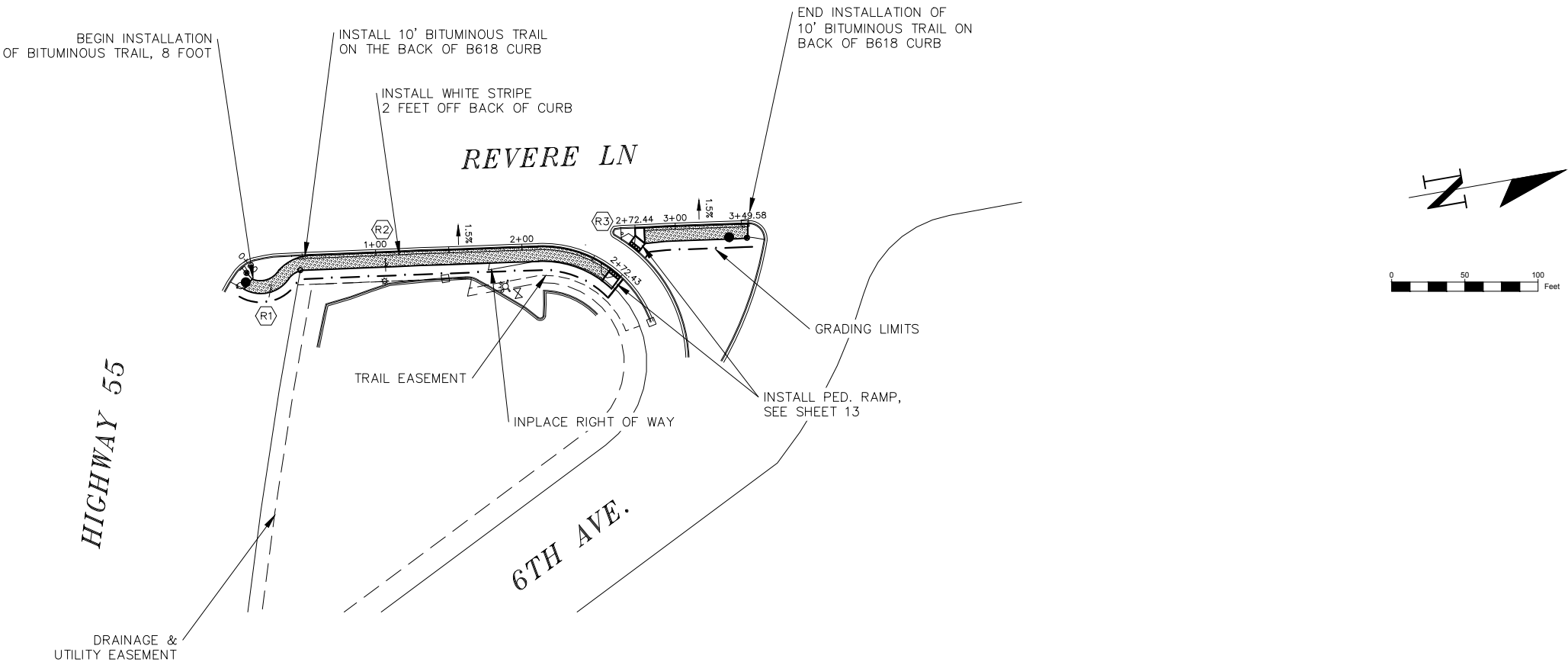


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

STA. 31+60 TO END
MEDINA ROAD TRAIL PLAN

STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	11-17
	CHECKED BY M. PAYNE	3-18
CITY PROJECT NO. PR189001.001 & PR 189001.002	REVIEWED BY M. PAYNE	3-18

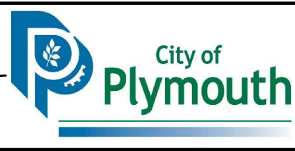
SHEET
15
OF
31



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MICHAEL J. PAYNE
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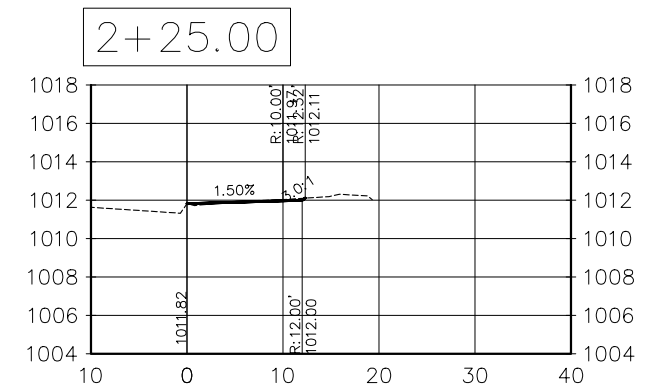
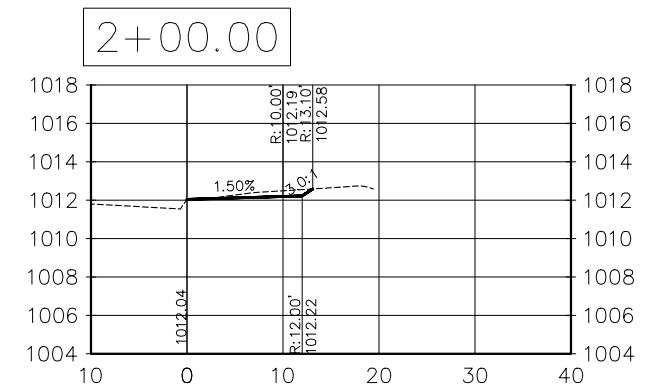
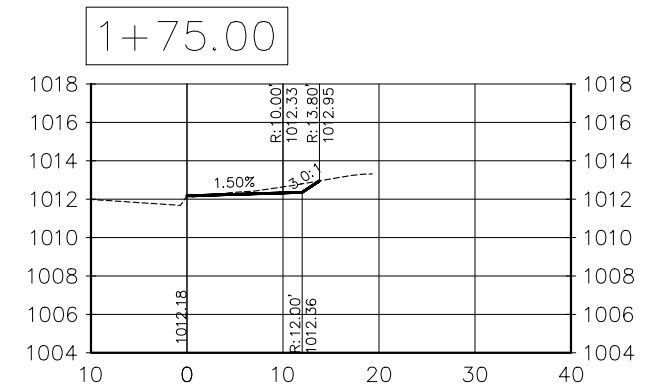
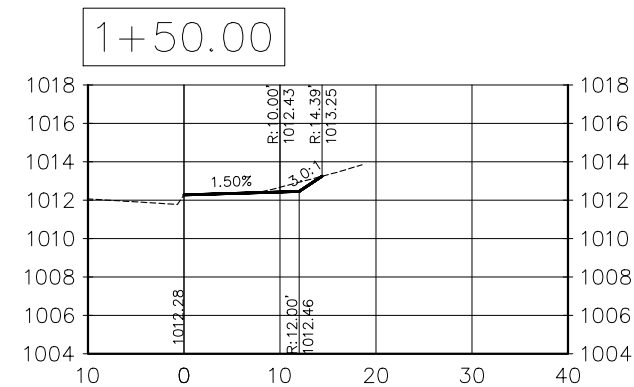
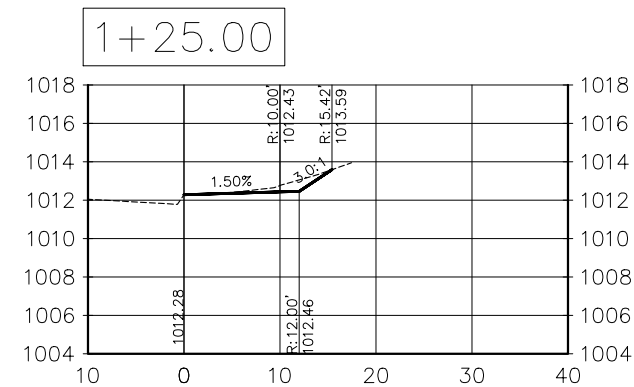
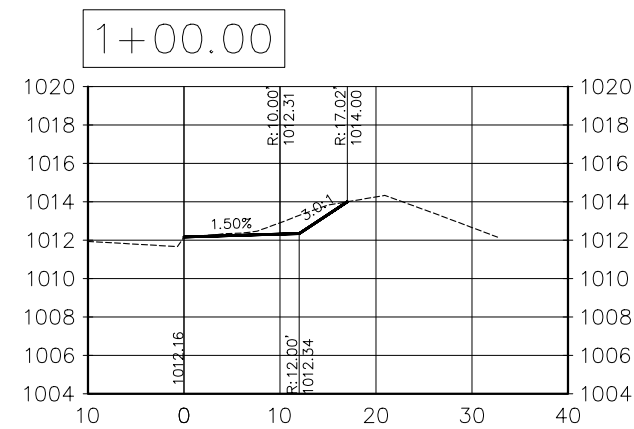
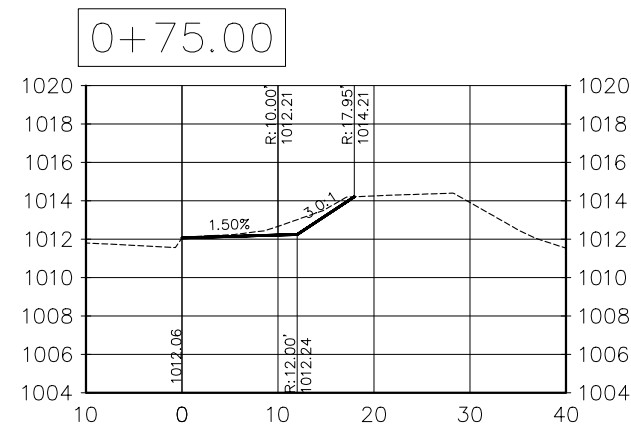
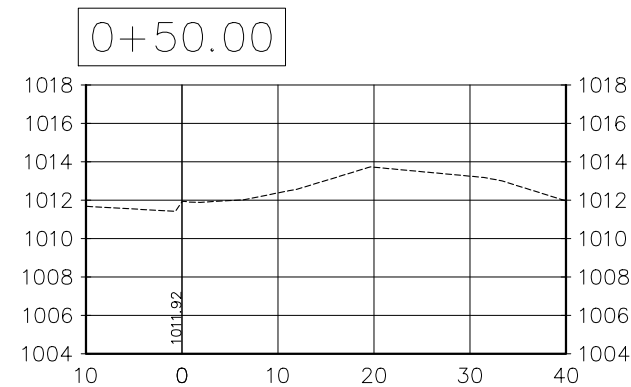
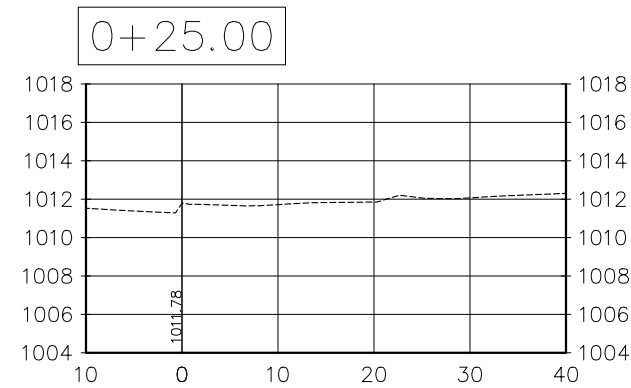


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

STA. 0+00 TO END
REVERE LANE TRAIL PLAN

STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	11-17
	CHECKED BY M. PAYNE	3-18
CITY PROJECT NO. PR189001.001 & PR 189001.002	REVIEWED BY M. PAYNE	3-18

SHEET
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OF
31



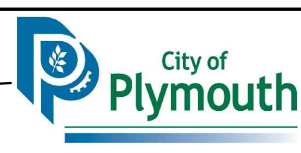
NO	DATE	BY	CKD	APPR	REVISION

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Signature: *M. Payne*

Michael J. Payne

Date: 3/30/18 License#: 50484

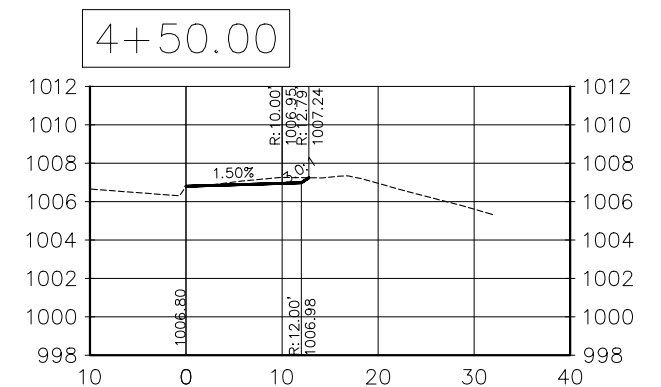
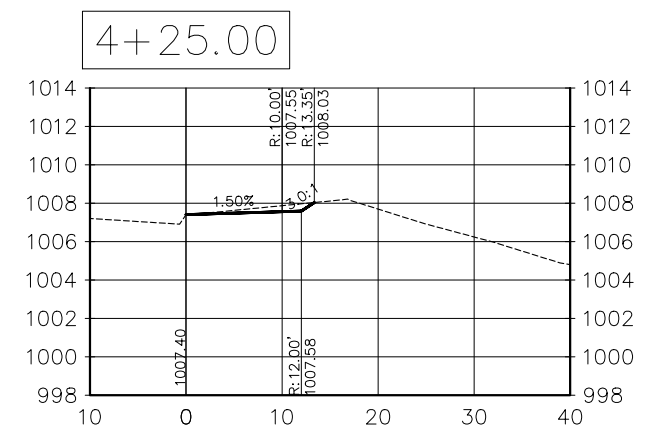
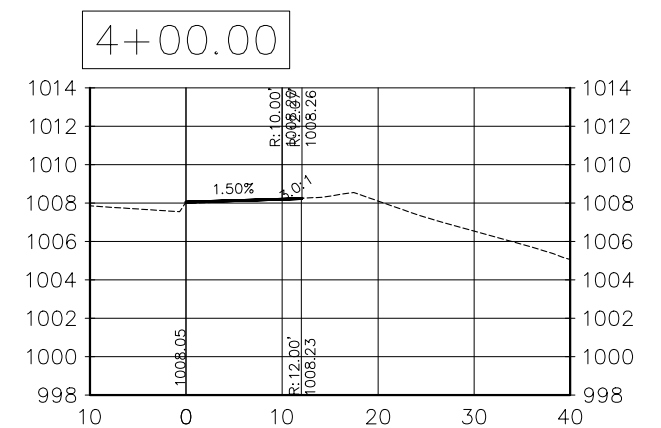
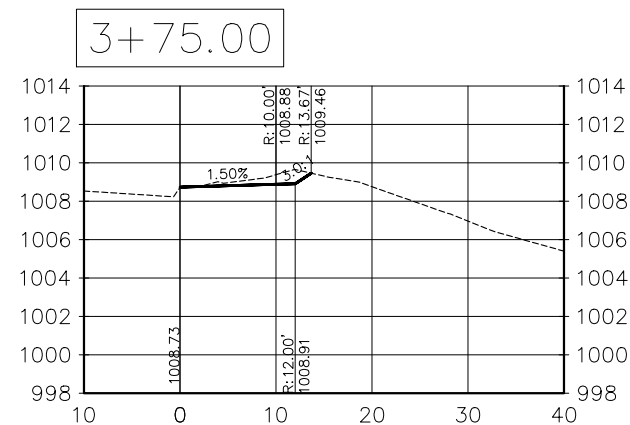
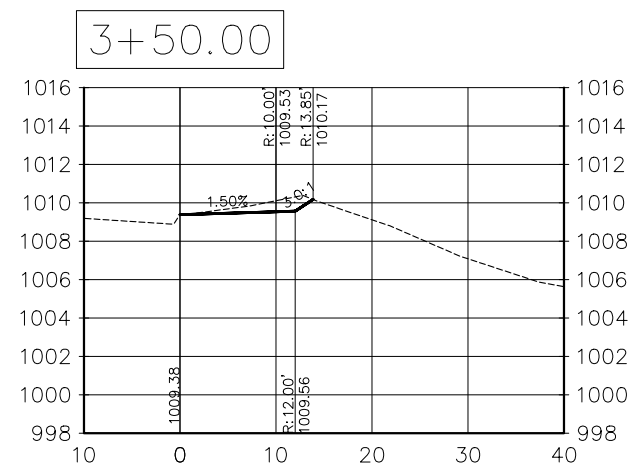
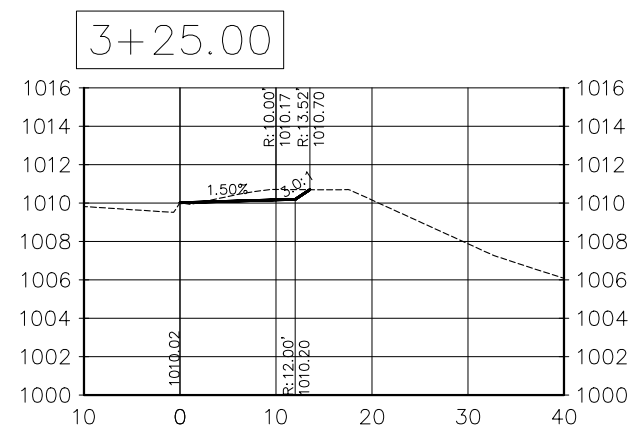
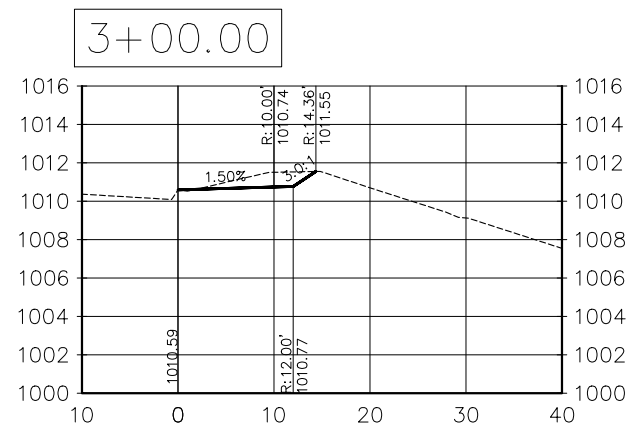
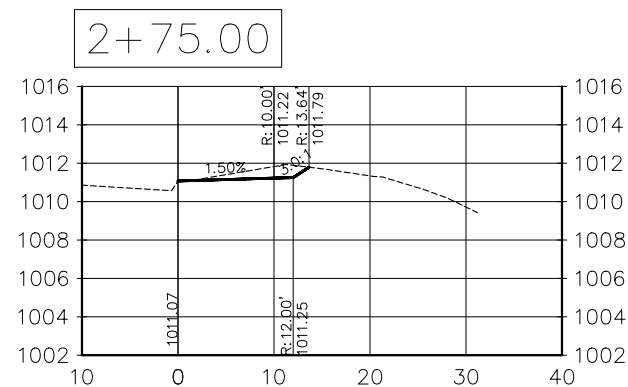
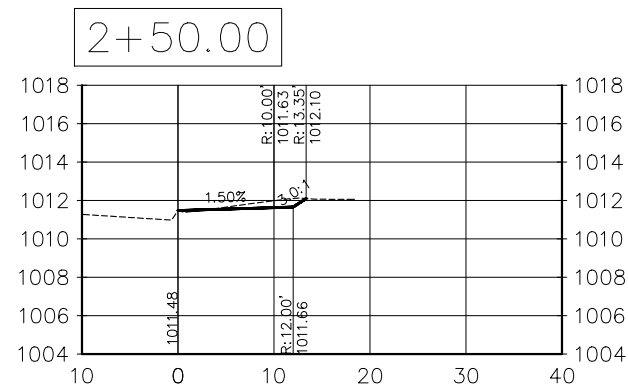


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

SECTIONS

STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	11-17
CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	3-18
	REVIEWED BY M. PAYNE	3-18

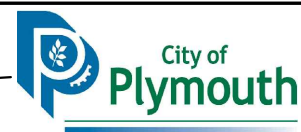
SHEET
17
OF
31



NO	DATE	BY	CKD	APPR	REVISION

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Signature: M. J. Payne
MICHAEL J. PAYNE
Date: 3/30/18 License#: 50484

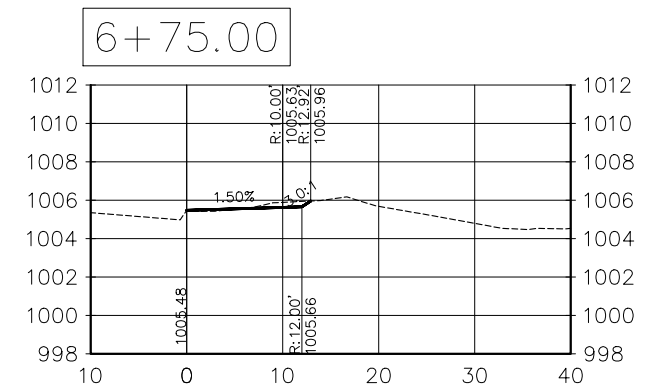
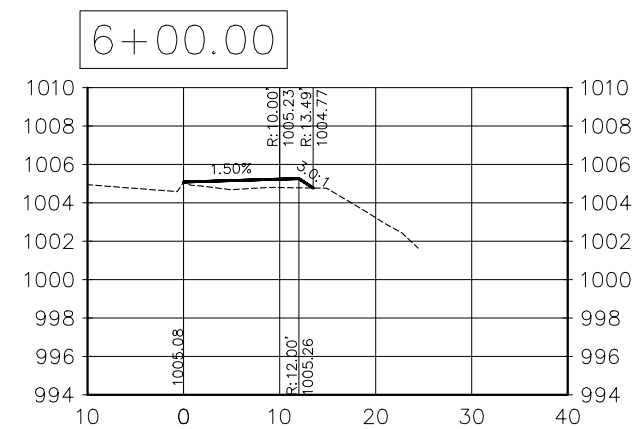
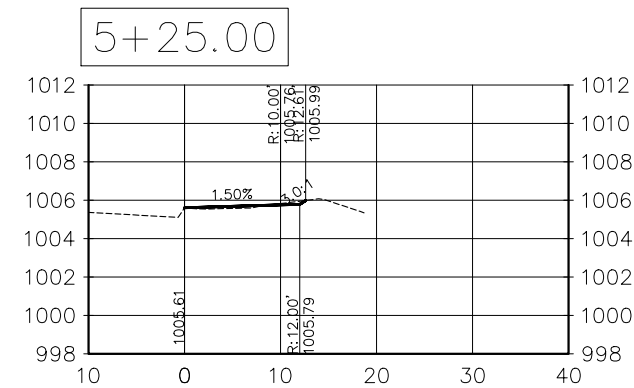
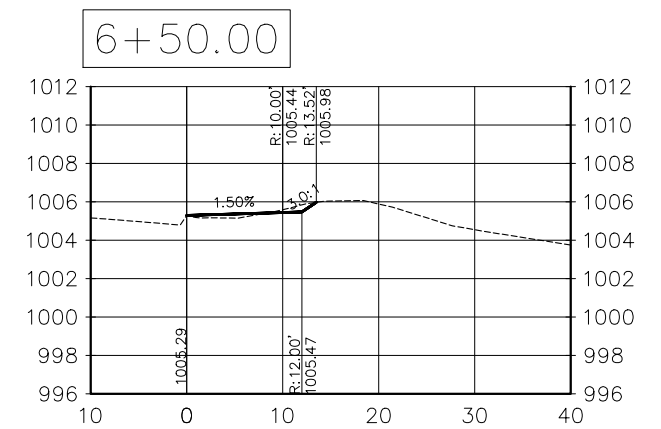
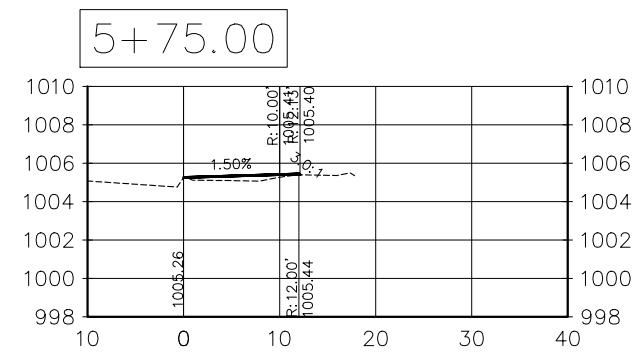
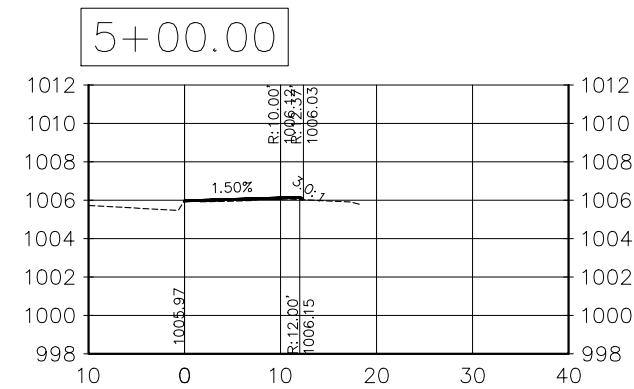
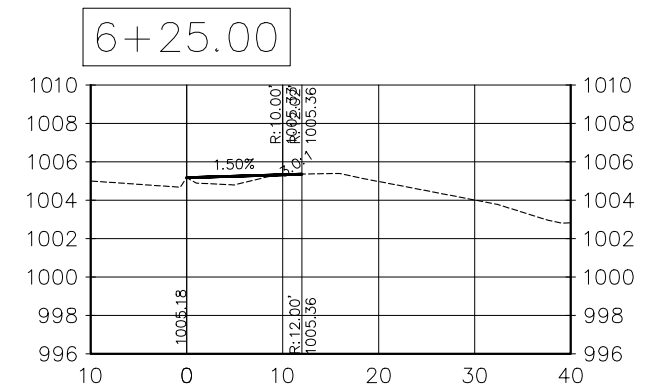
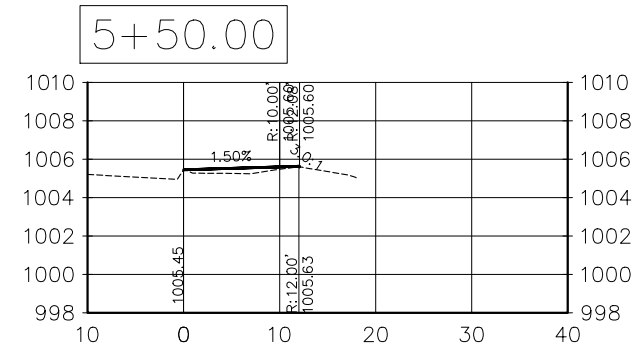
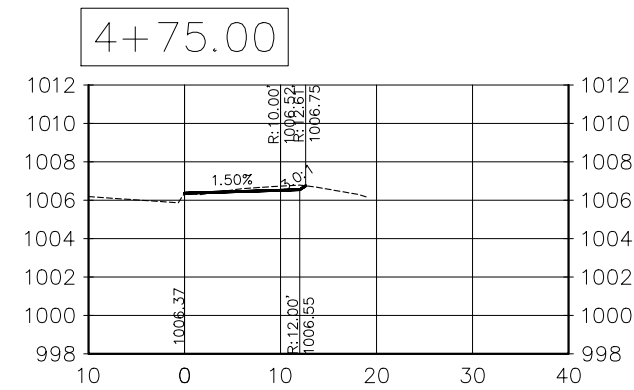


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

SECTIONS

STATE AID PROJECT NO. ####	DRAWN BY <u>T. QUAST</u>	DATE <u>3-18</u>
COUNTY PROJECT NO. ####	DESIGNED BY <u>M. PAYNE</u>	<u>11-17</u>
CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY <u>M. PAYNE</u>	<u>3-18</u>
	REVIEWED BY <u>M. PAYNE</u>	<u>3-18</u>

SHEET
18
OF
31



NO	DATE	BY	CKD	APPR	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.

Signature: *M. Payne*

Michael J. Payne

Date: 3/30/18 License#: 50484

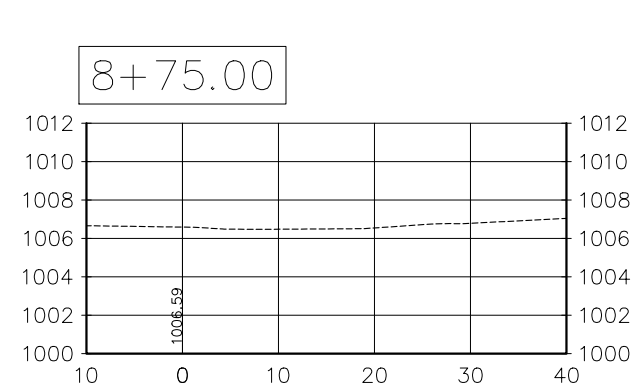
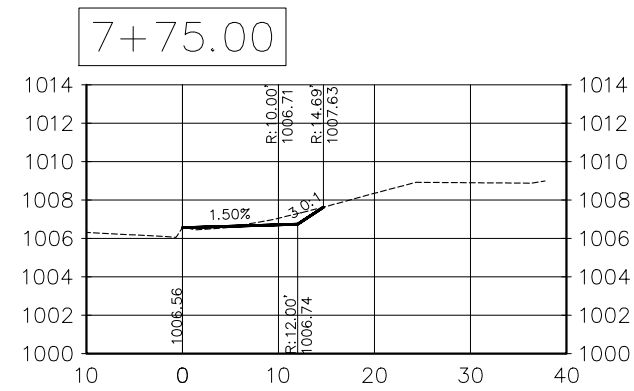
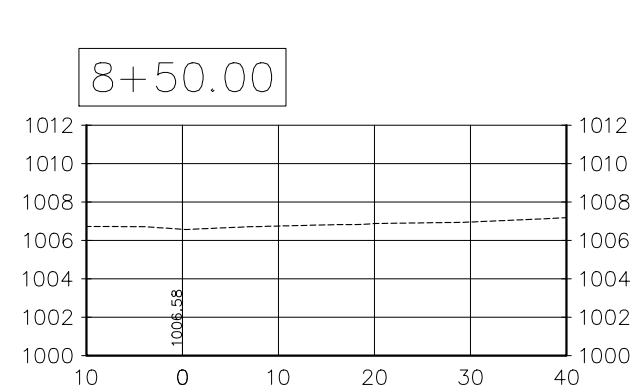
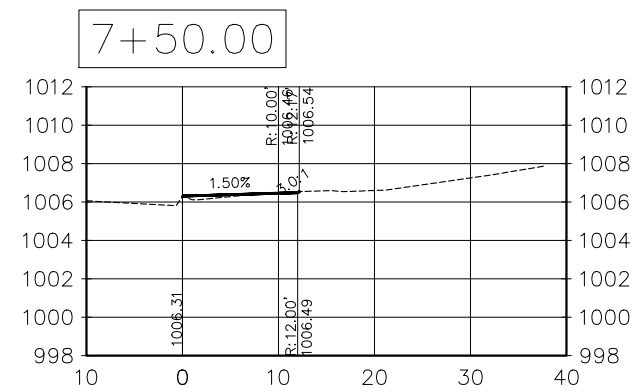
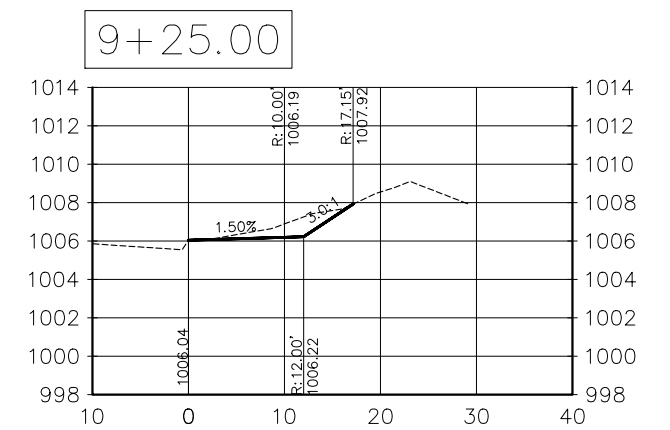
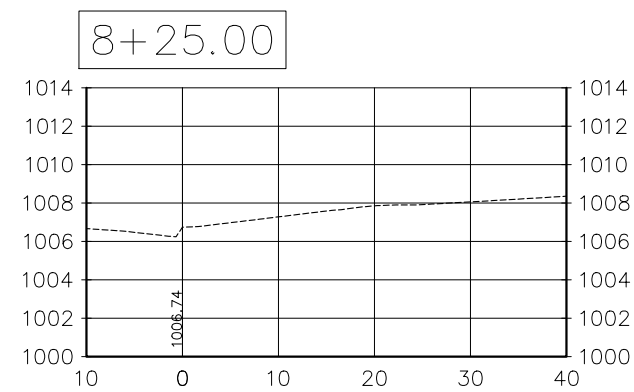
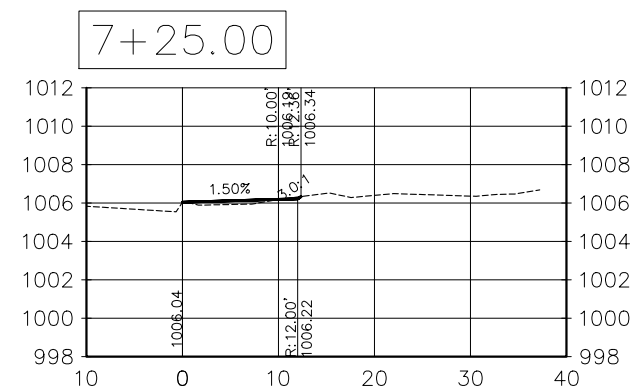
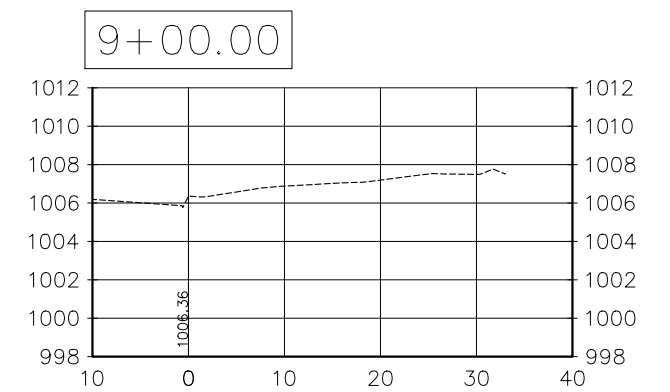
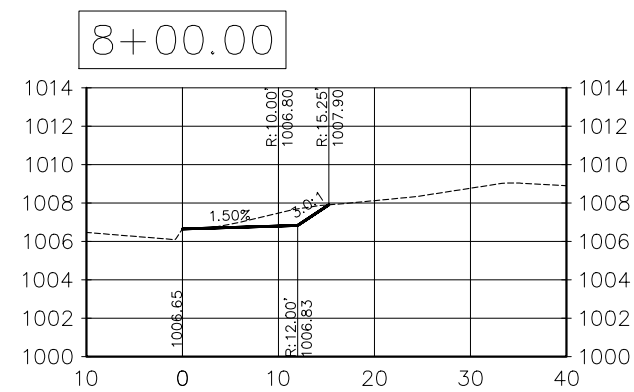
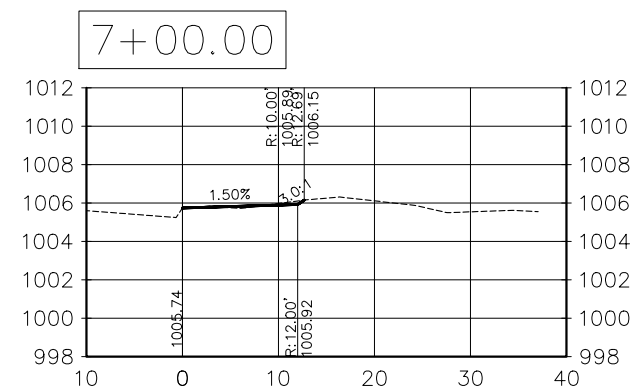


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

SECTIONS

STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	11-17
CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	3-18
	REVIEWED BY M. PAYNE	3-18

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OF
31



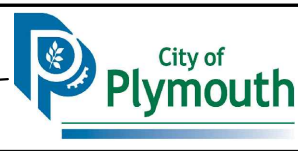
NO	DATE	BY	CKD	APPR	REVISION

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Michael J. Payne

Date: 3/30/18 License#: 50484

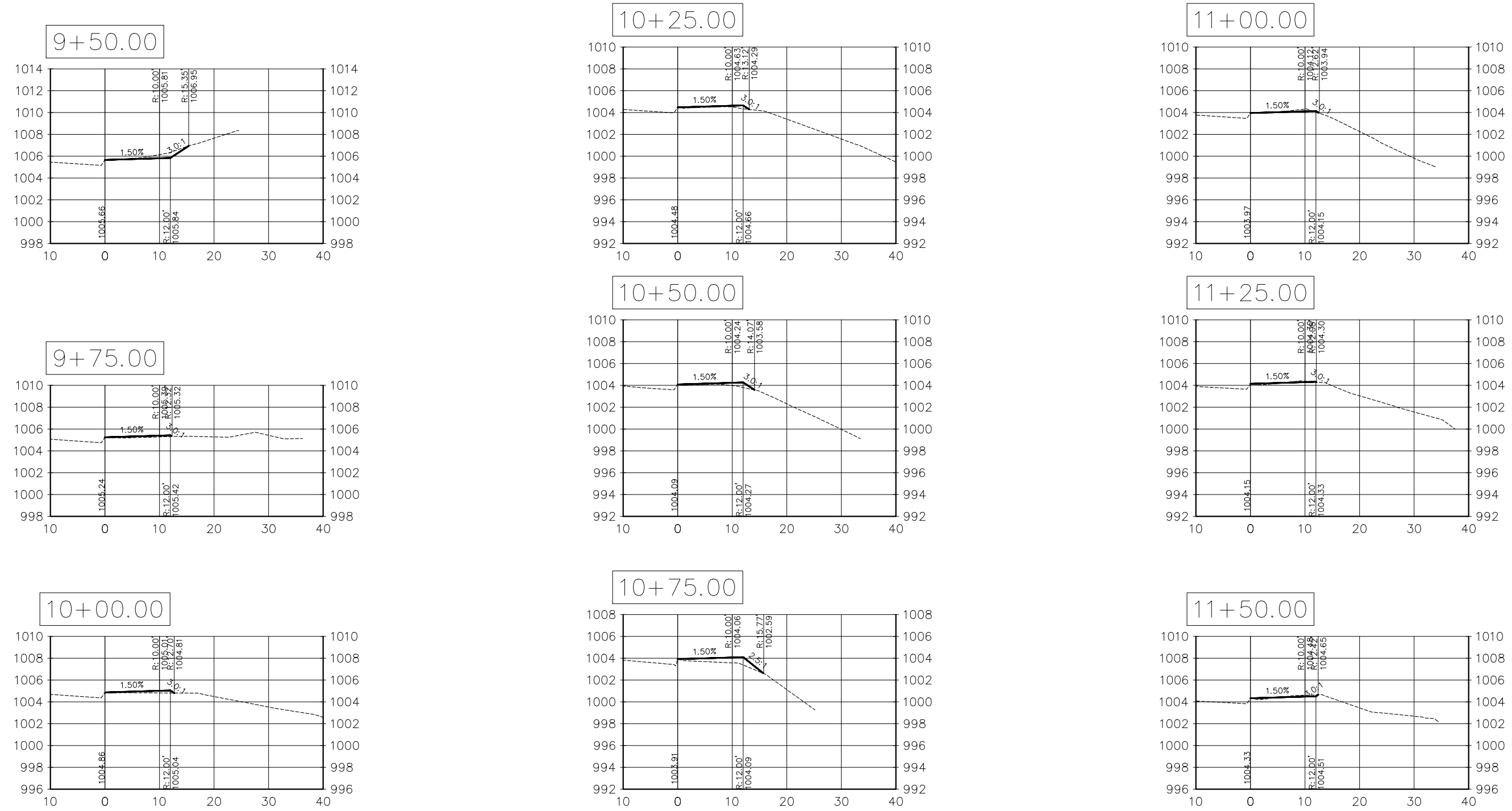


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

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STATE AID PROJECT NO. ###	DRAWN BY I. QUAST	DATE 3-18
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CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	3-18
	REVIEWED BY M. PAYNE	3-18

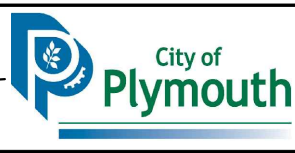
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31



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MICHAEL J. PAYNE
Date: 3/30/18 License#: 50484

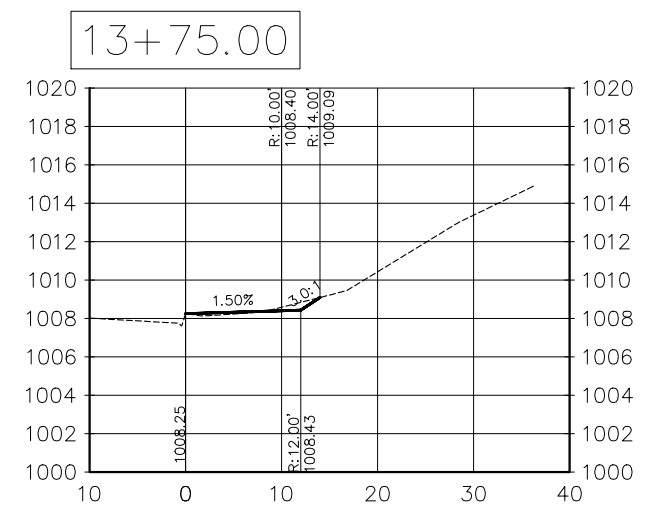
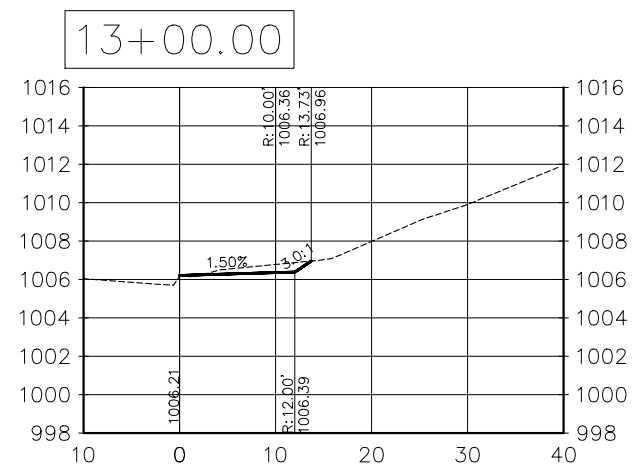
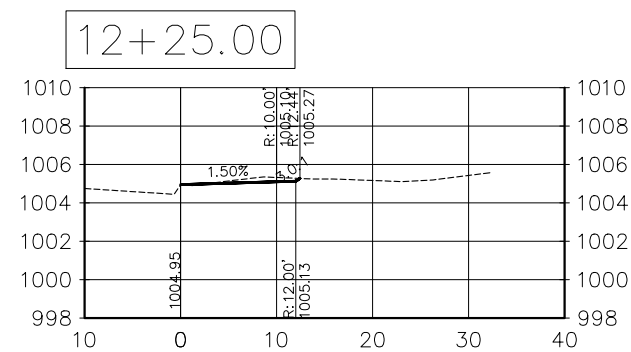
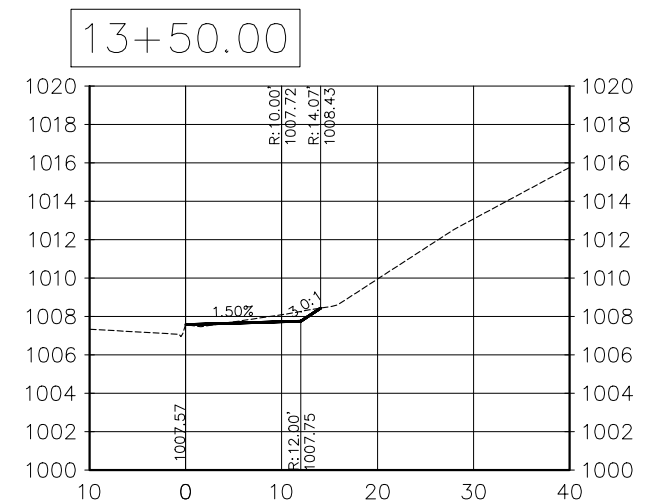
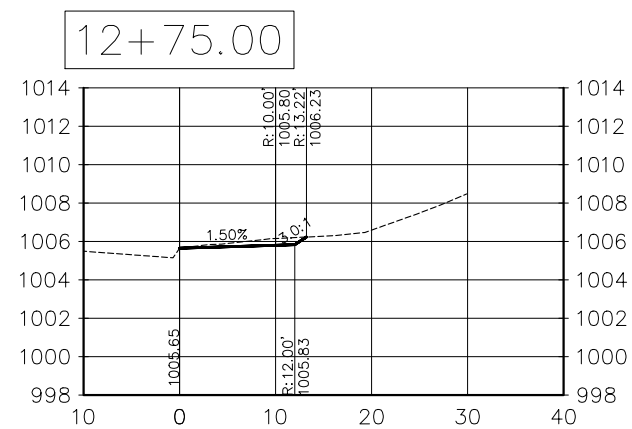
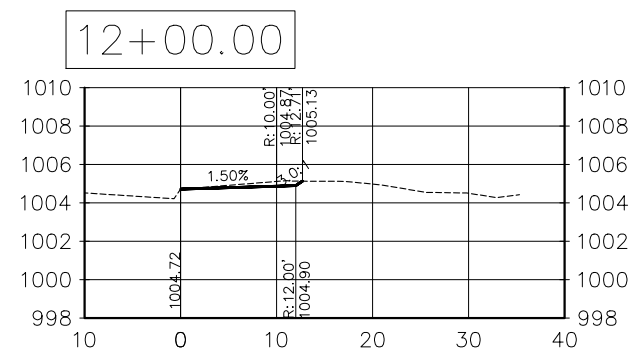
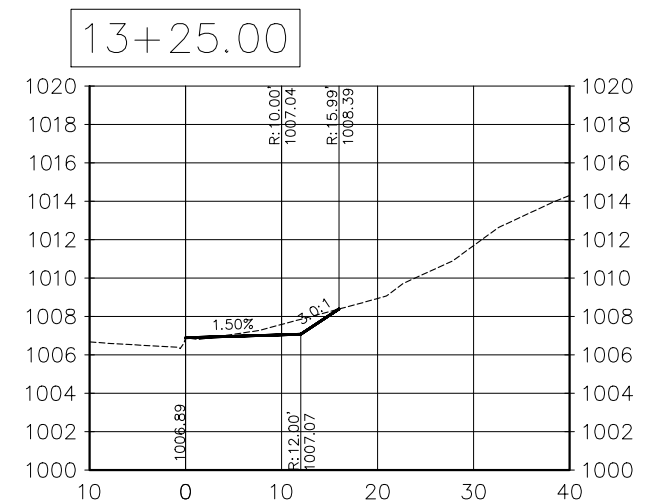
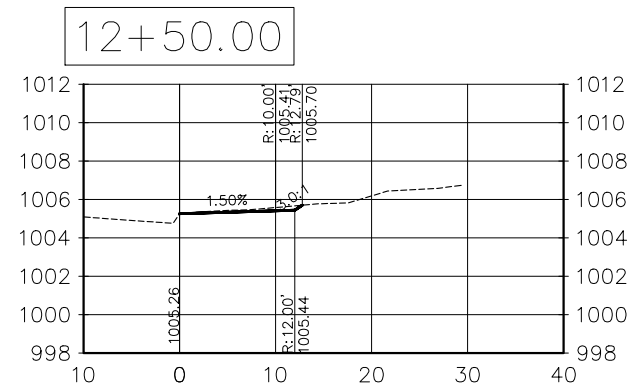
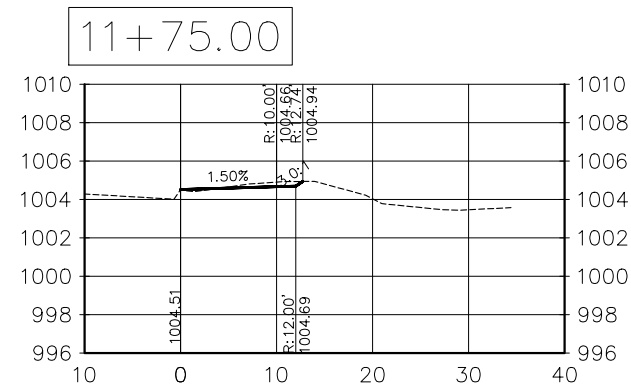


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

SECTIONS

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	REVIEWED BY M. PAYNE	3-18

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21
OF
31



NO	DATE	BY	CKD	APPR	REVISION

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Signature: M. J. Payne
MICHAEL J. PAYNE

Date: 3/30/18 License #: 50484

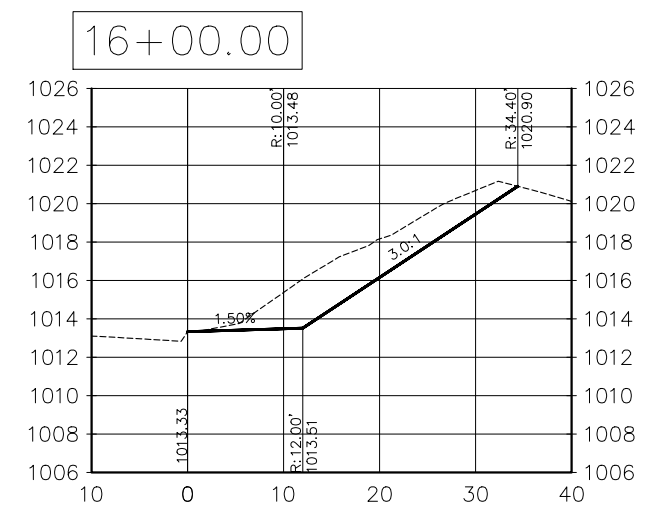
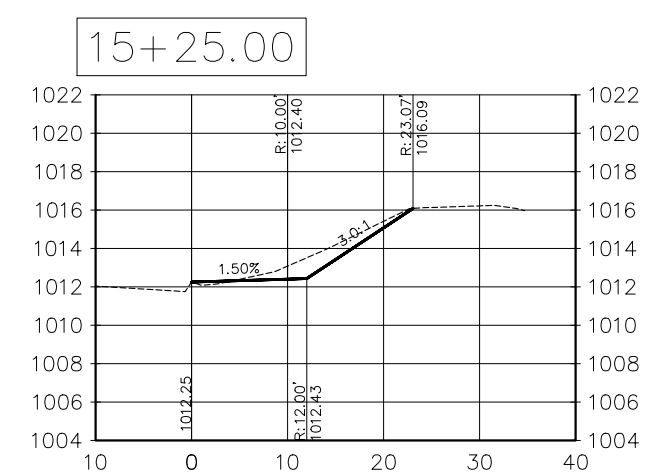
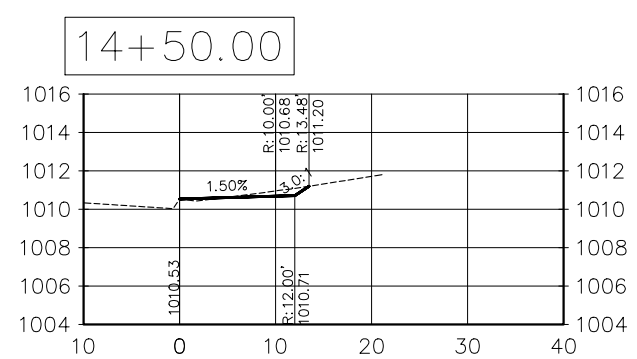
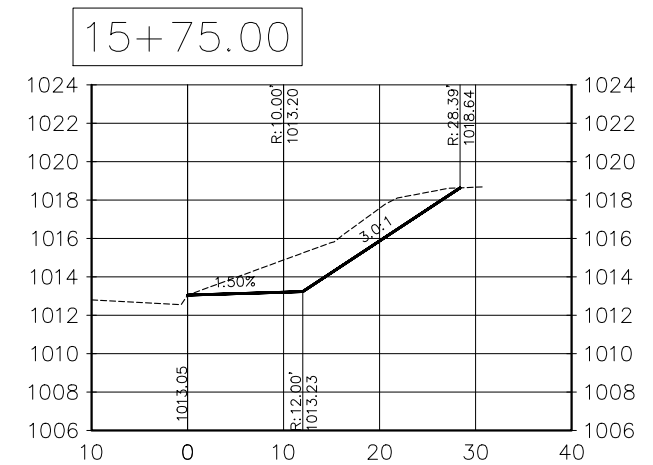
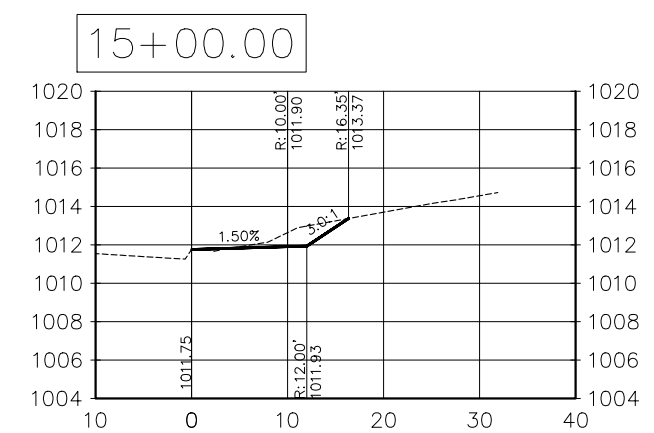
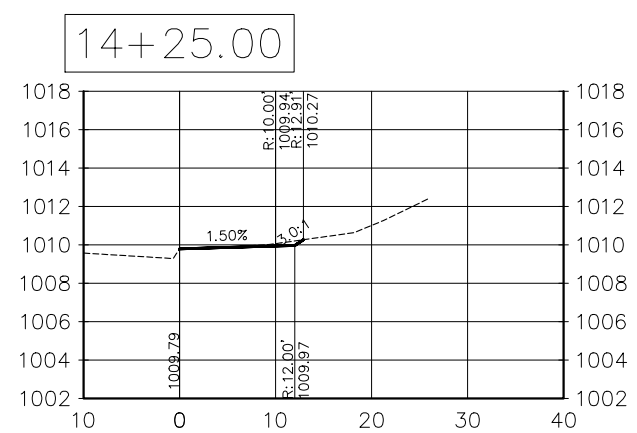
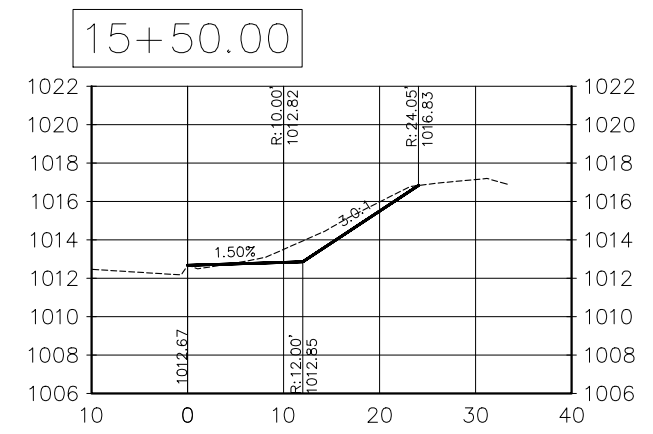
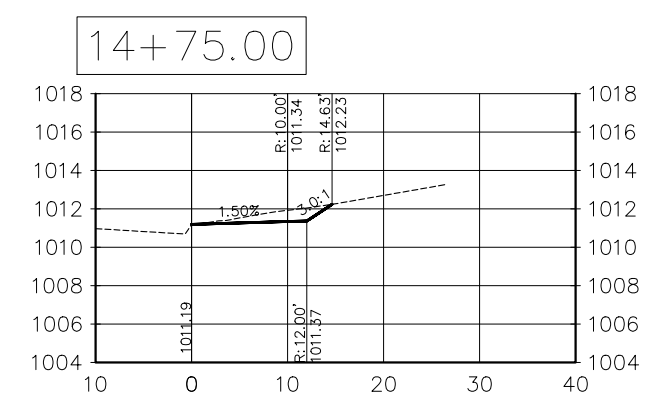
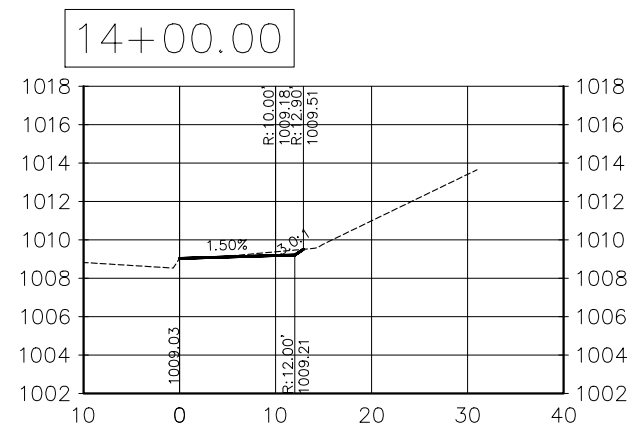


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

SECTIONS

STATE AID PROJECT NO.	DRAWN BY	DATE
####	T. QUAST	3-18
COUNTY	DESIGNED BY	
PROJECT NO.	M. PAYNE	11-17
####	CHECKED BY	
CITY PROJECT NO.	M. PAYNE	3-18
PR189001.001 &	REVIEWED BY	
PR 189001.002	M. PAYNE	3-18

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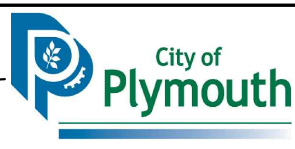
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Michael J. Payne

Date: 3/30/18 License#: 50484

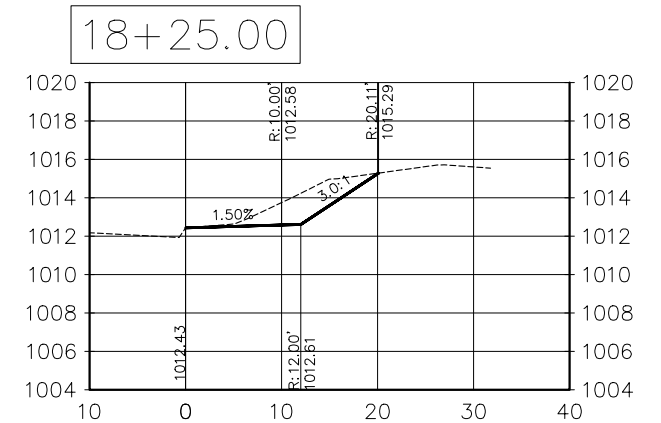
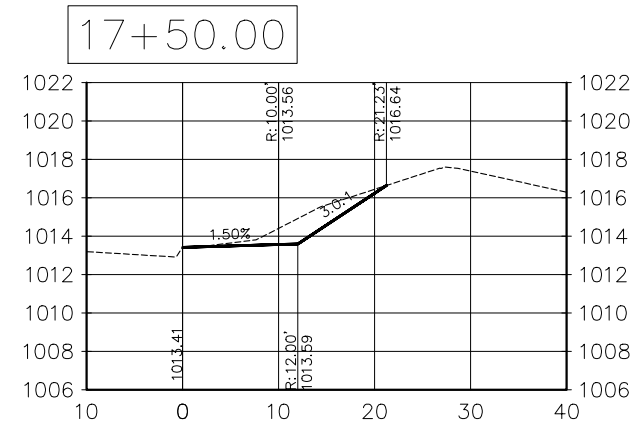
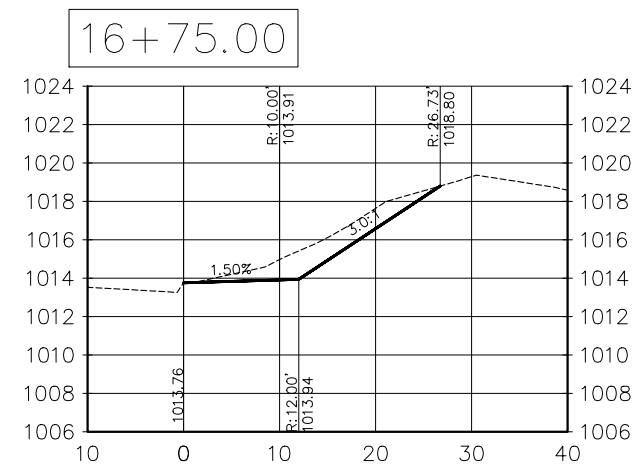
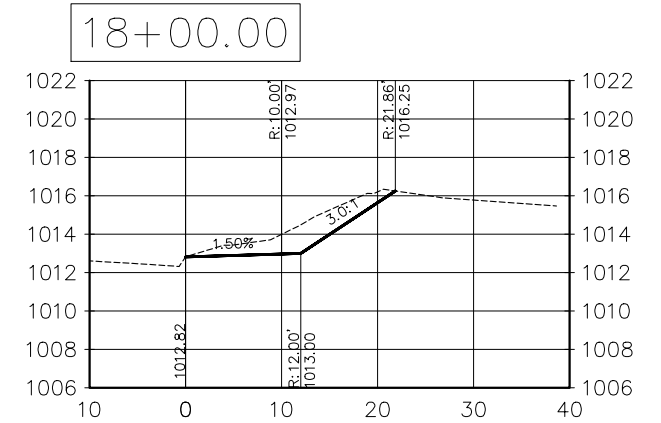
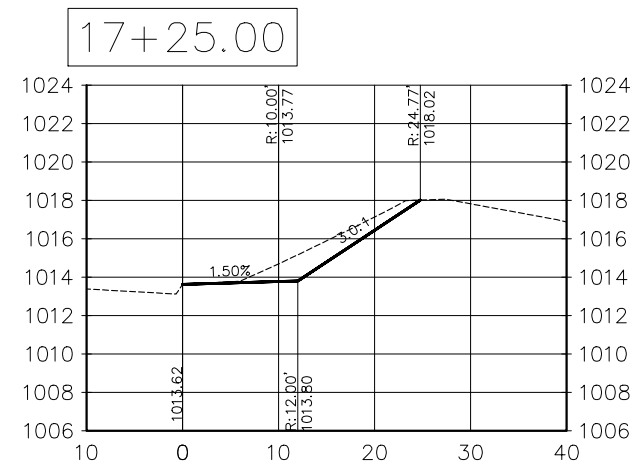
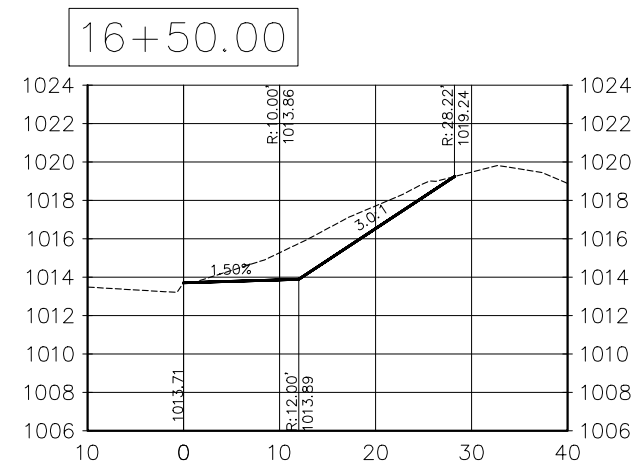
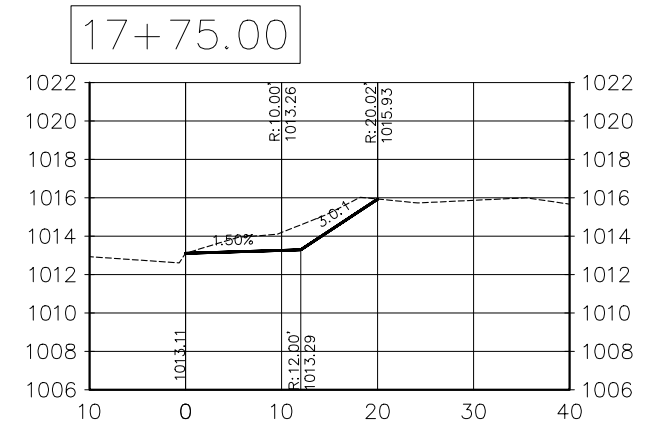
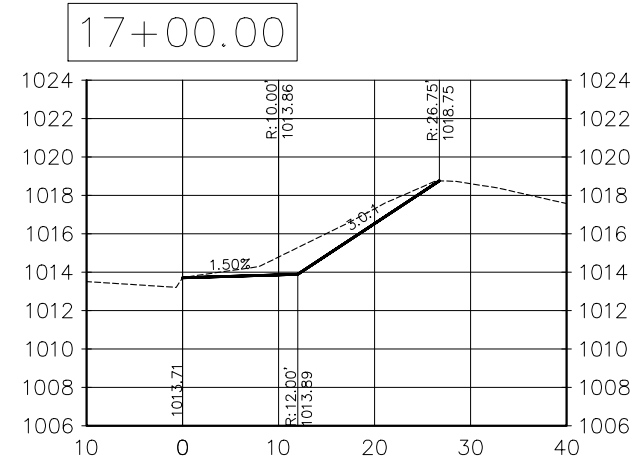
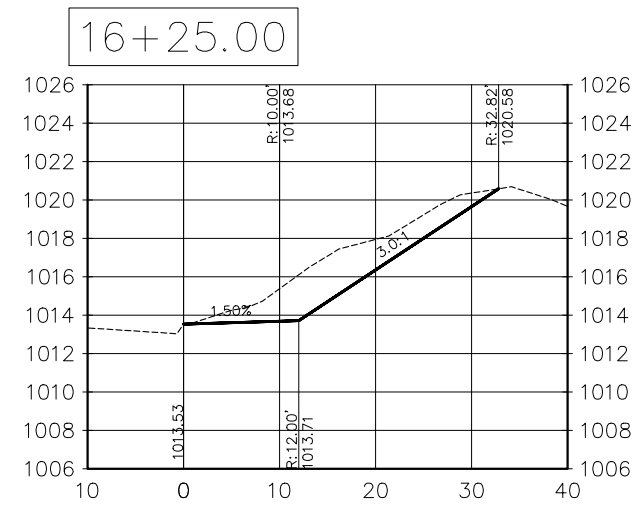


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

SECTIONS

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31



NO	DATE	BY	CKD	APPR	REVISION

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Michael J. Payne

Date: 3/30/18 License#: 50484



PLYMOUTH, MINNESOTA

MEDINA ROAD & REVERE LANE TRAIL PROJECT

SECTIONS

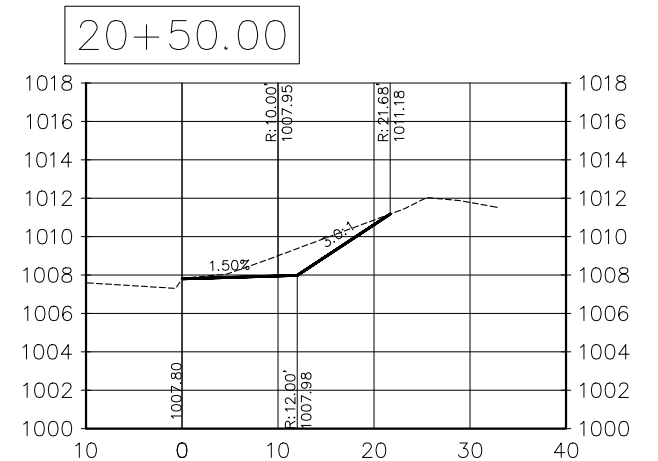
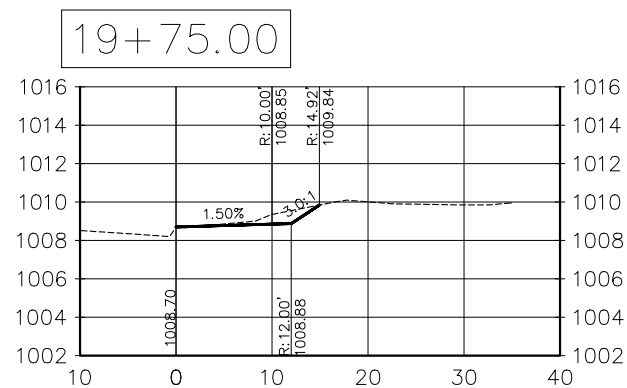
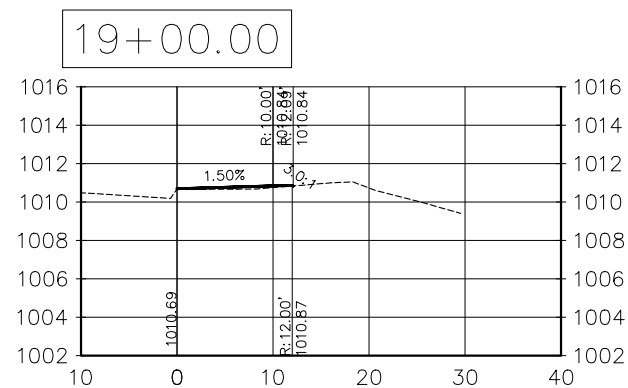
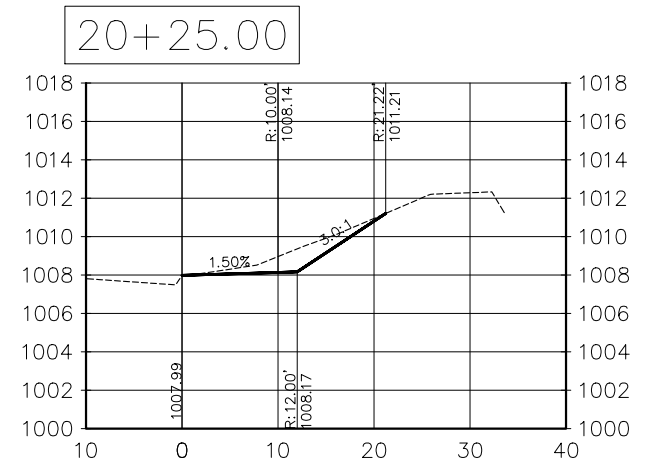
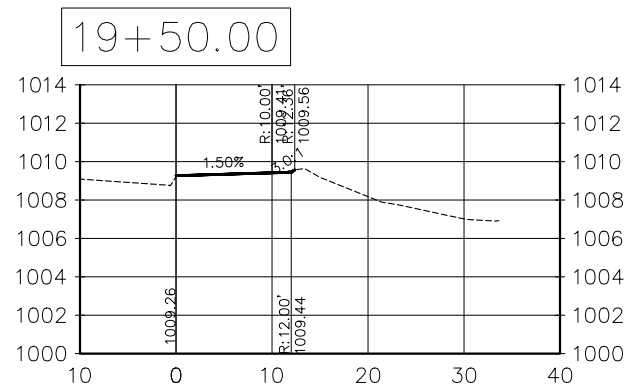
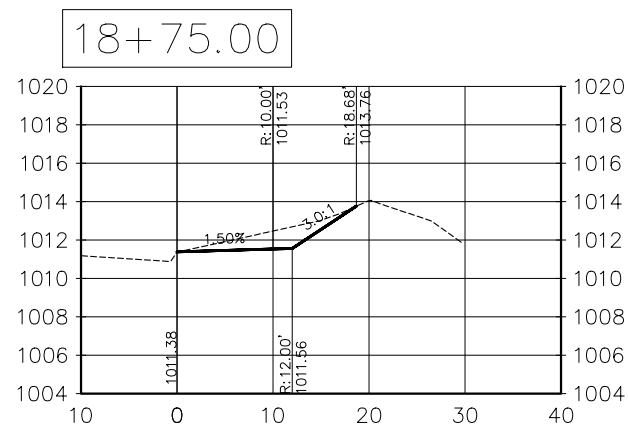
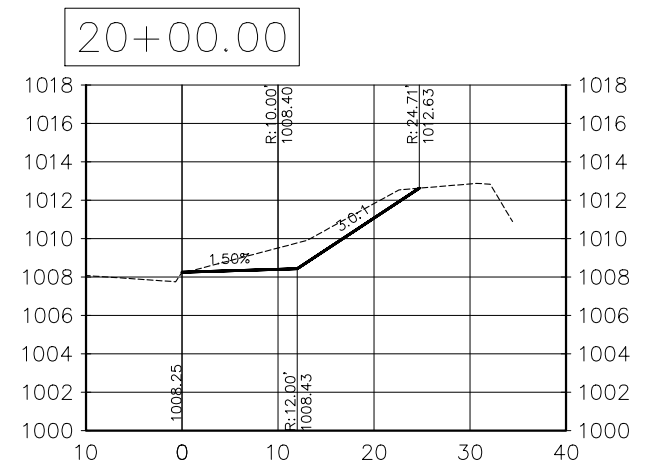
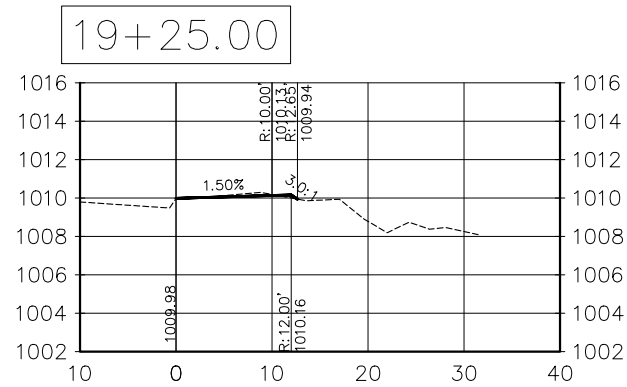
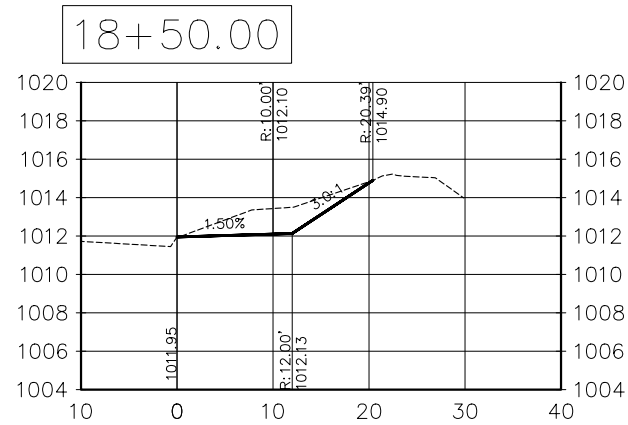
STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
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CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	3-18
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SHEET

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31



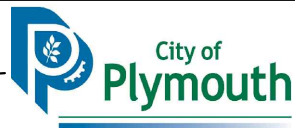
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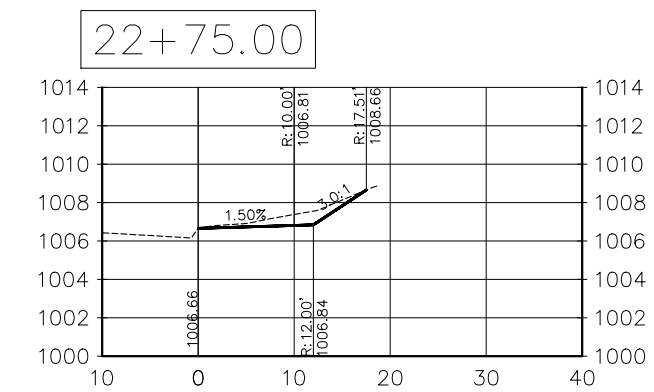
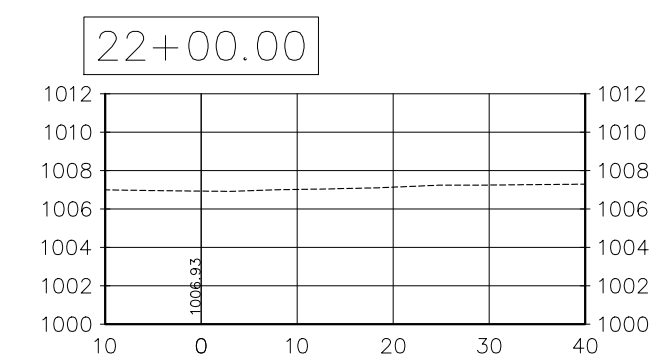
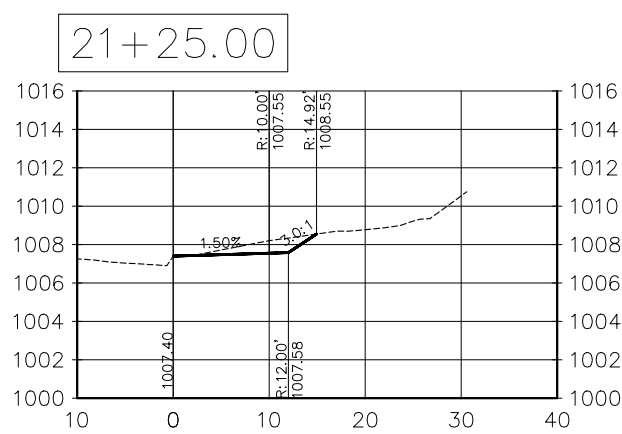
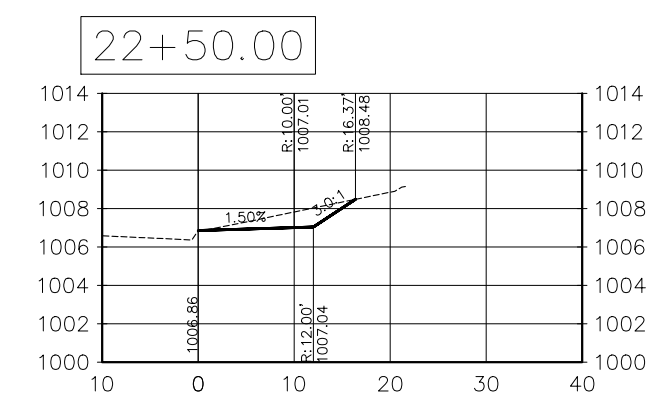
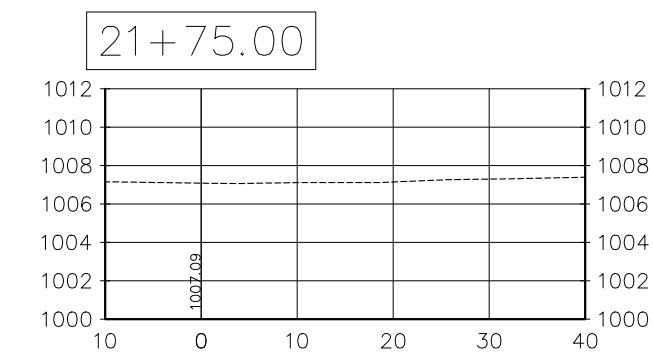
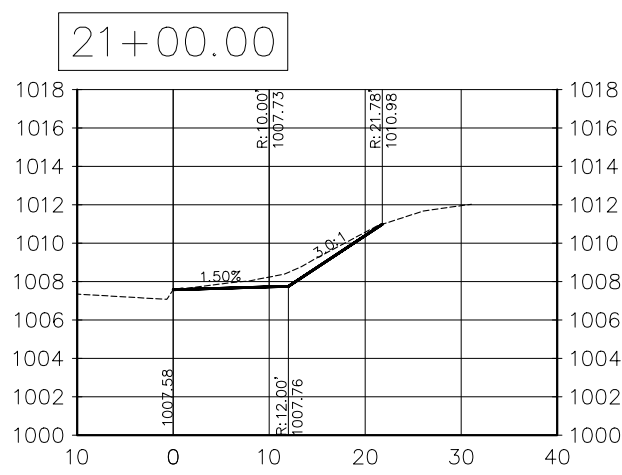
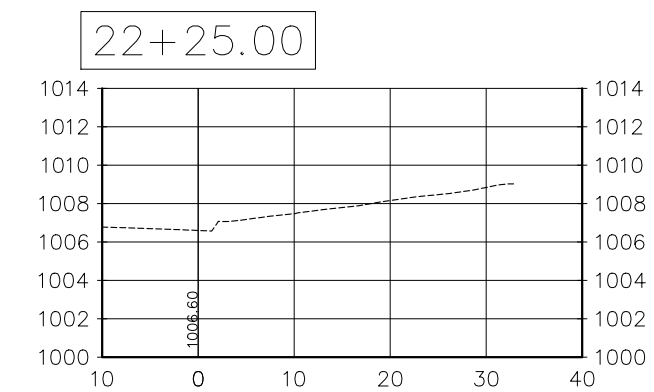
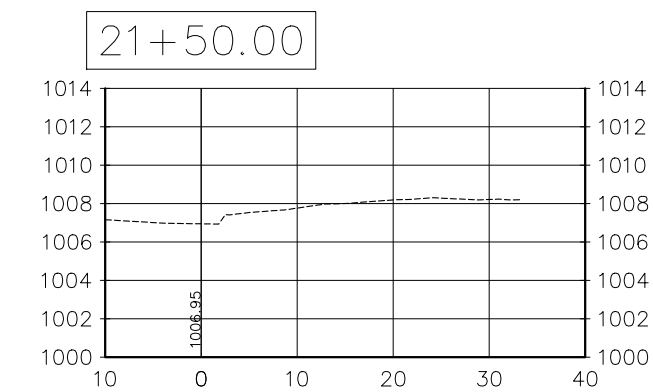
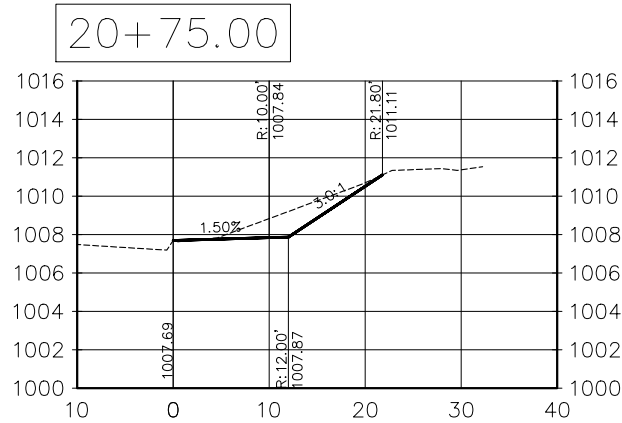


PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

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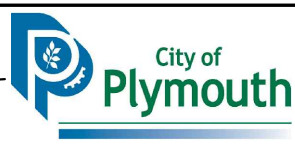
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Michael J. Payne

Date: 3/30/18 License#: 50484

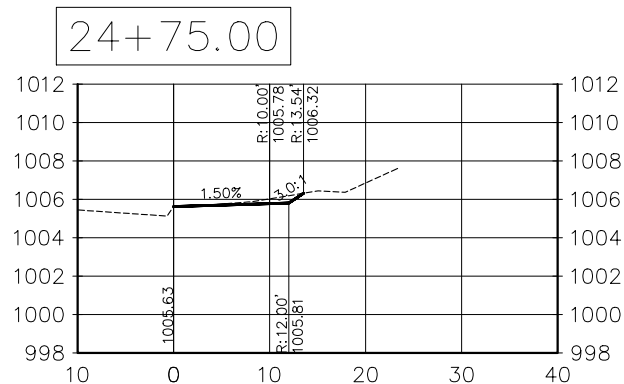
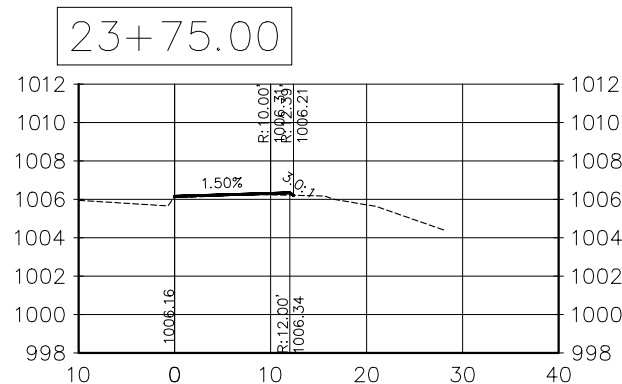
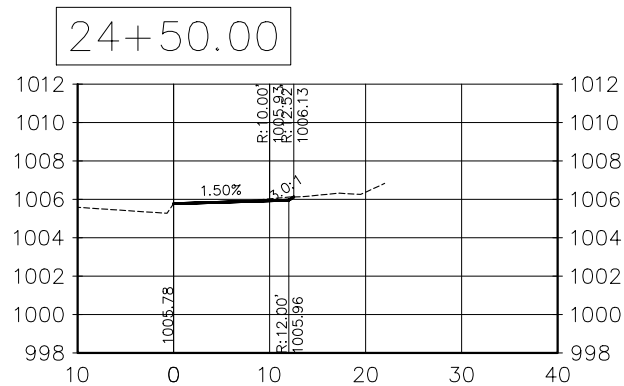
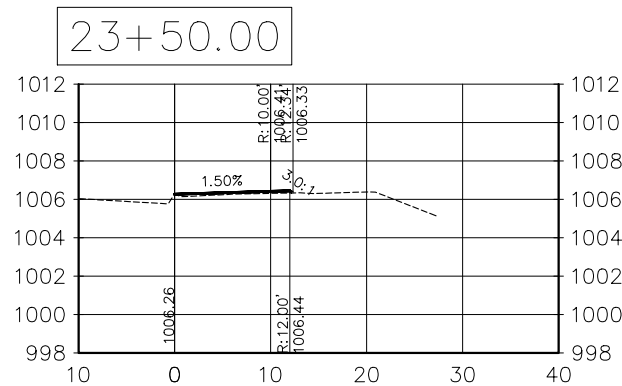
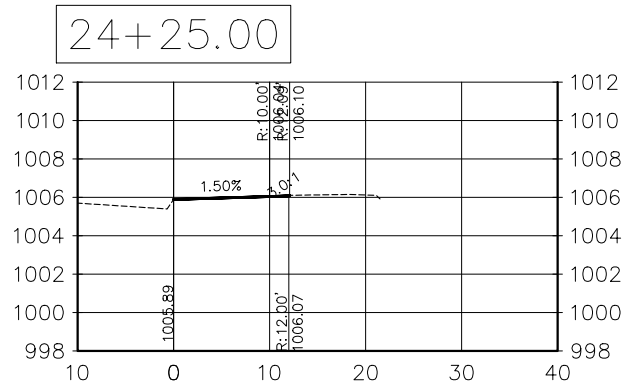
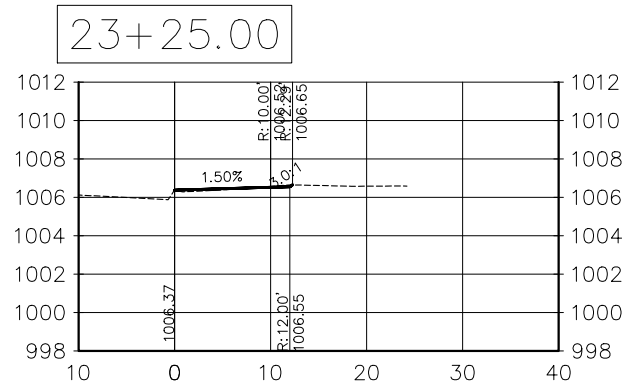
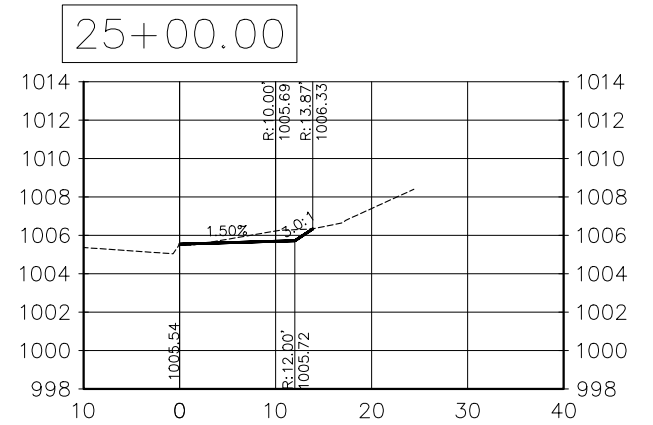
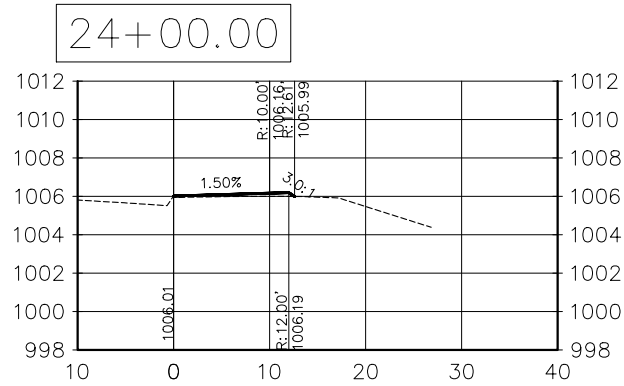
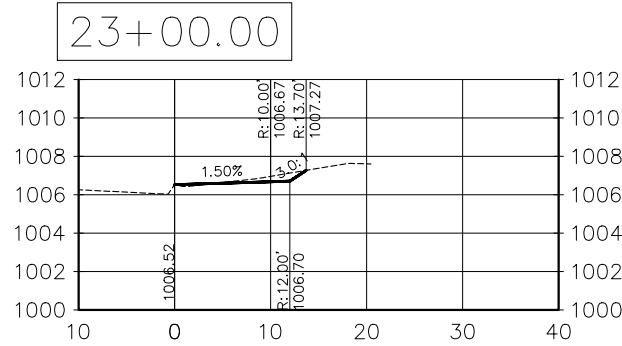


PLYMOUTH, MINNESOTA
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TRAIL PROJECT

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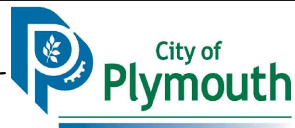
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Signature: *M. Payne*

Michael J. Payne

Date: 3/30/18 License#: 50484



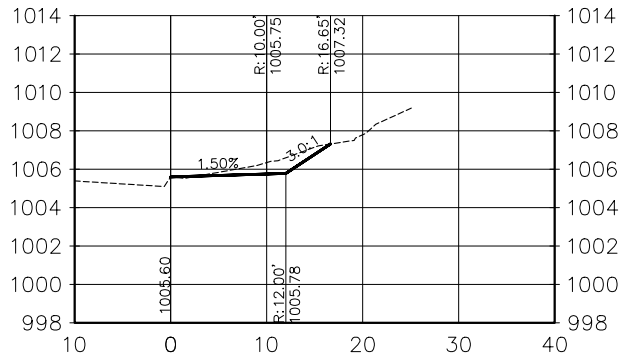
PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

SECTIONS

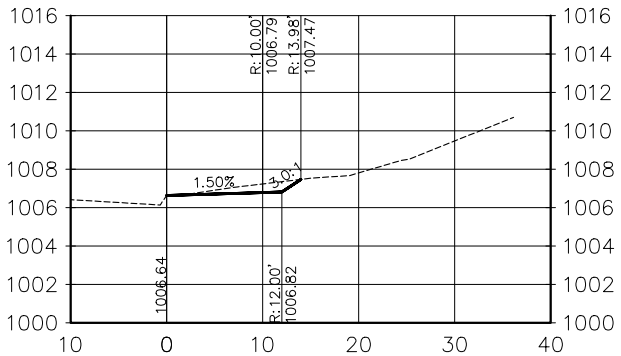
STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	11-17
CITY PROJECT NO. PR189001.001 & PR 189001.002	CHECKED BY M. PAYNE	3-18
	REVIEWED BY M. PAYNE	3-18

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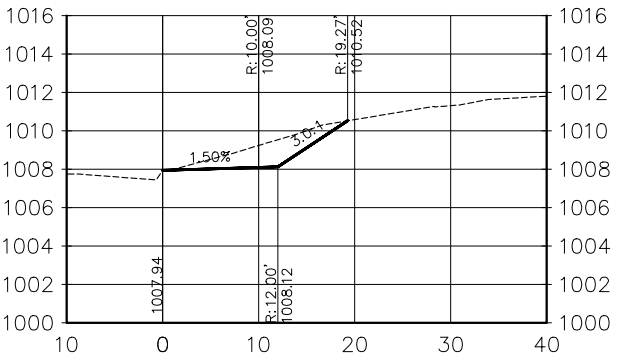
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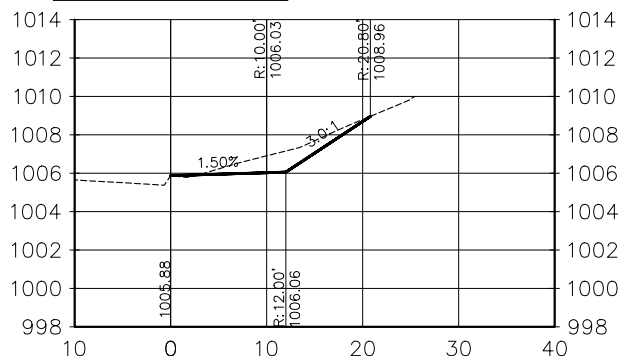
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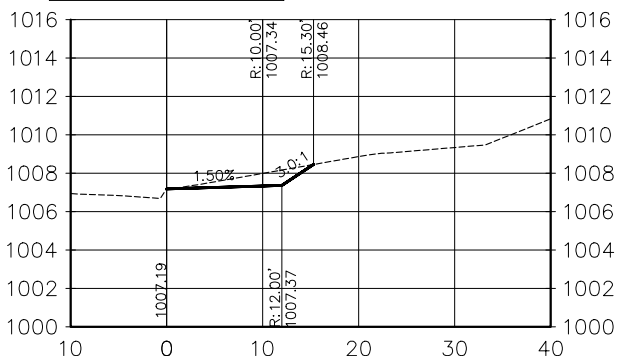
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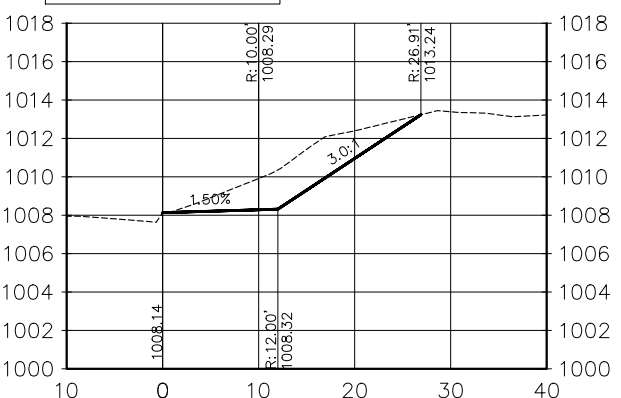
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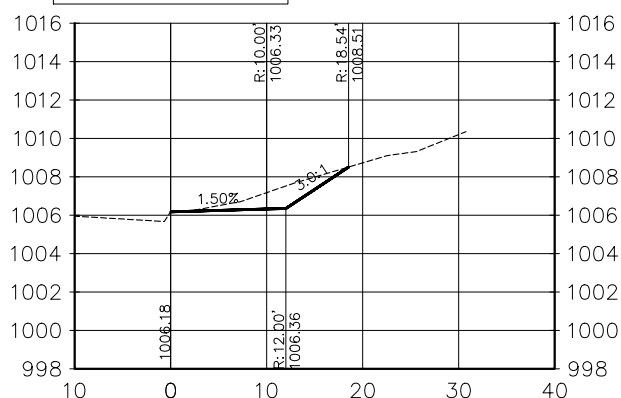
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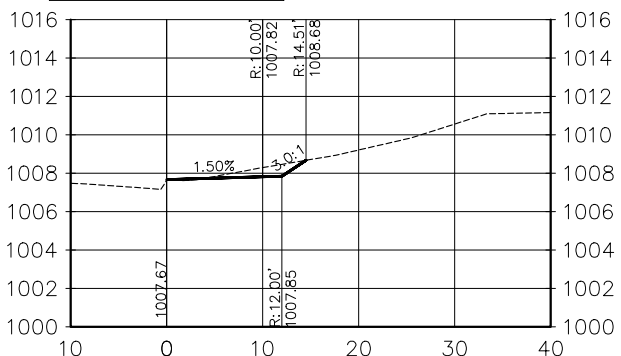
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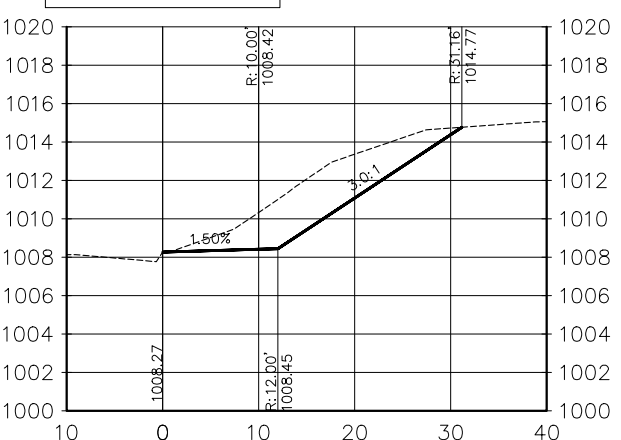
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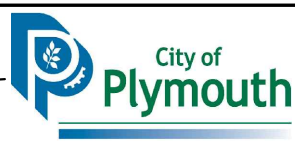
NO	DATE	BY	CKD	APPR	REVISION

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PLYMOUTH, MINNESOTA

MEDINA ROAD & REVERE LANE TRAIL PROJECT

SECTIONS

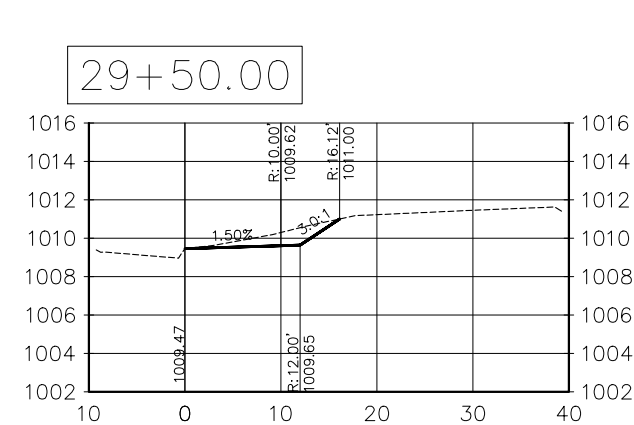
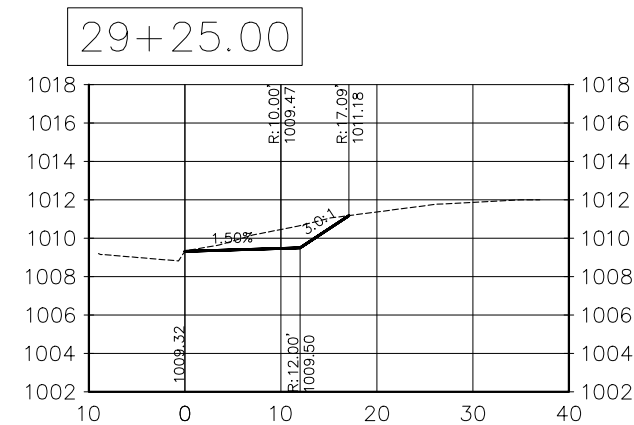
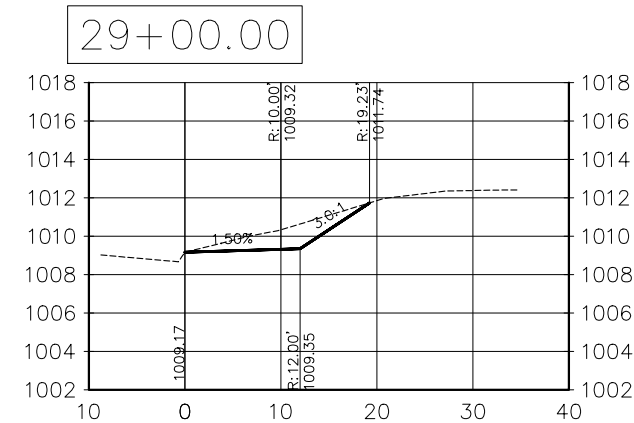
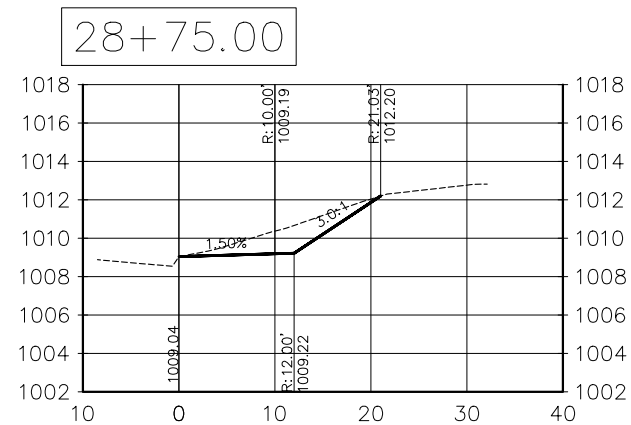
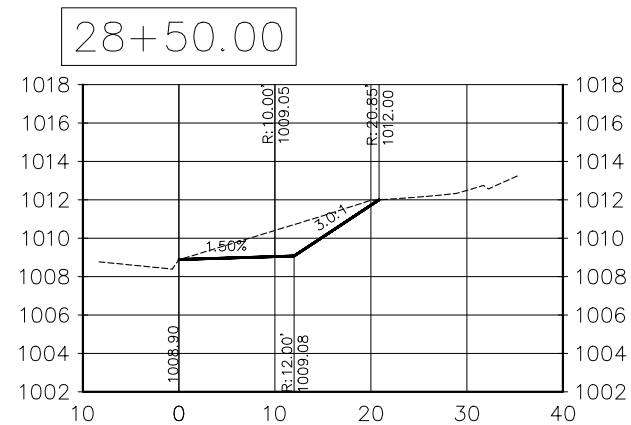
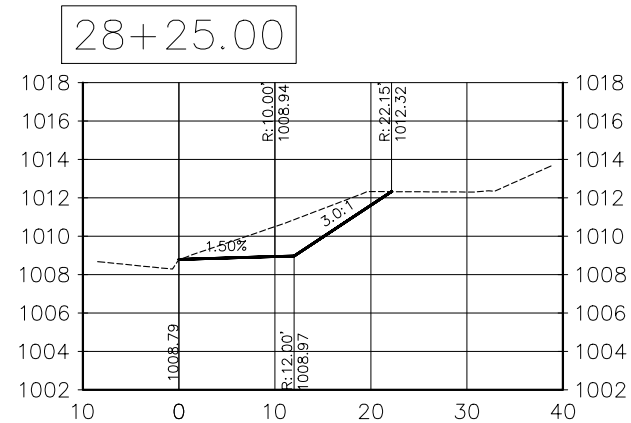
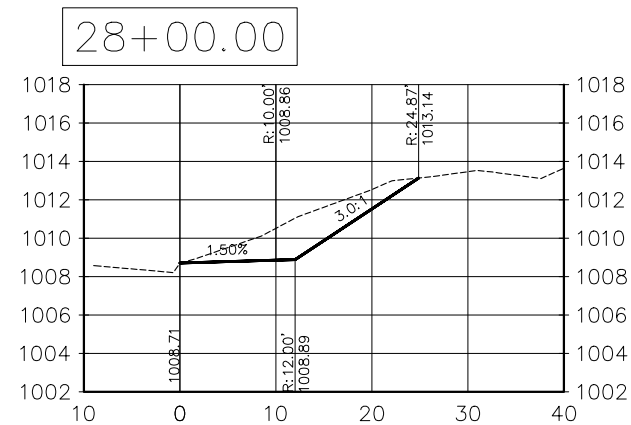
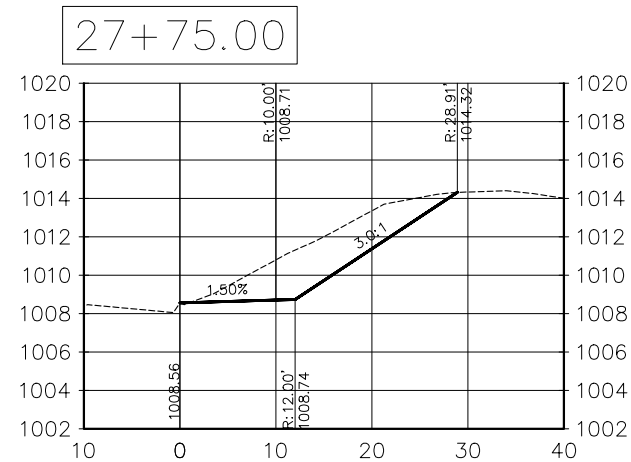
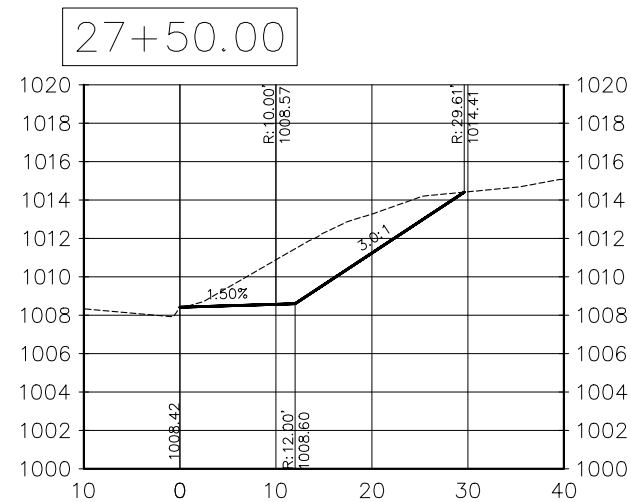
STATE AID PROJECT NO. ###	DRAWN BY T. QUAST	DATE 3-18
COUNTY PROJECT NO. ###	DESIGNED BY M. PAYNE	11-17
	CHECKED BY M. PAYNE	3-18
CITY PROJECT NO. PR189001.001 & PR 189001.002	REVIEWED BY M. PAYNE	3-18

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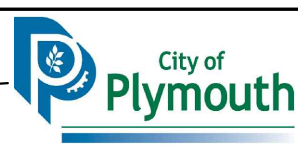
NO	DATE	BY	CKD	APPR	REVISION

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Michael J. Payne

Date: 3/30/18 License#: 50484



PLYMOUTH, MINNESOTA
MEDINA ROAD & REVERE LANE
TRAIL PROJECT

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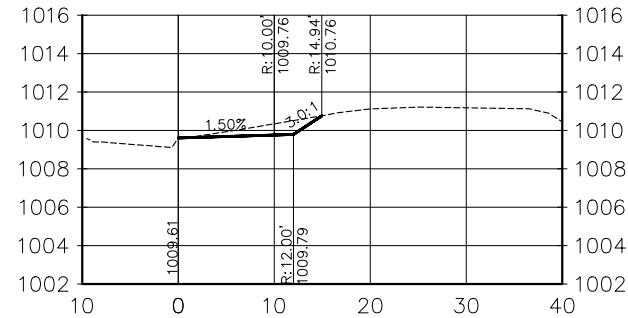
STATE AID PROJECT NO. ###
COUNTY PROJECT NO. ###
CITY PROJECT NO. PR189001.001 & PR 189001.002

DRAWN BY I. QUAST
DESIGNED BY M. PAYNE
CHECKED BY M. PAYNE
REVIEWED BY M. PAYNE

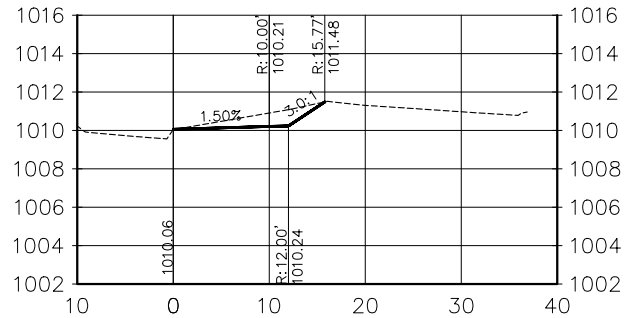
DATE 3-18
11-17
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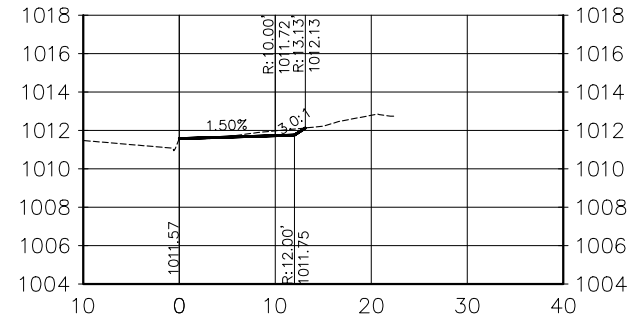
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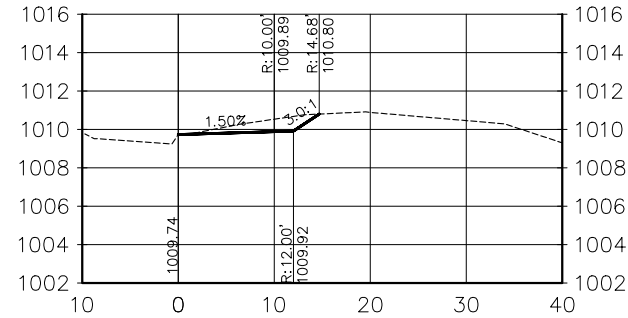
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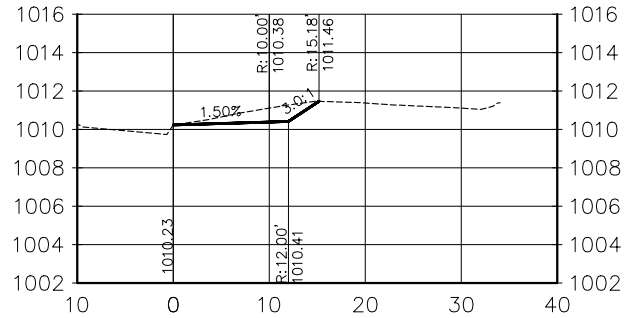
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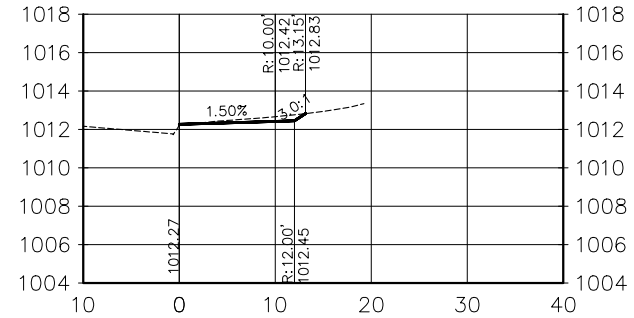
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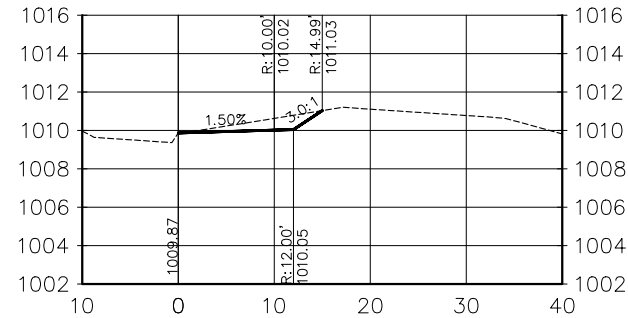
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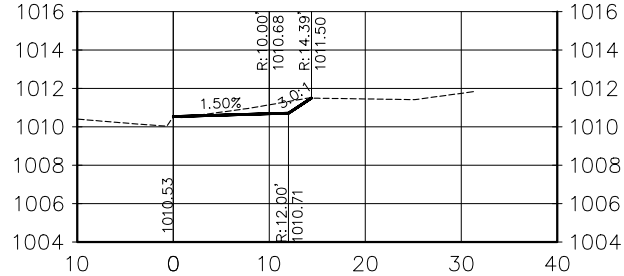
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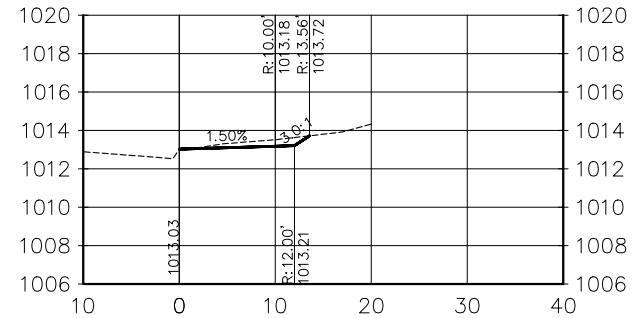
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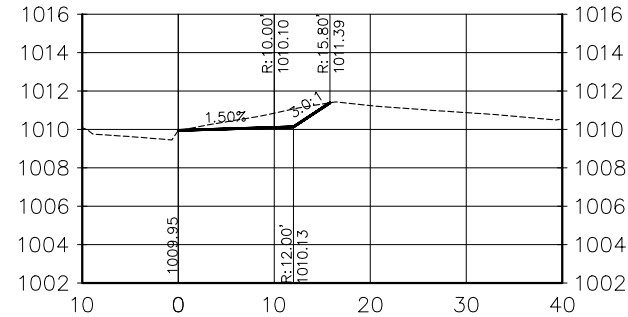
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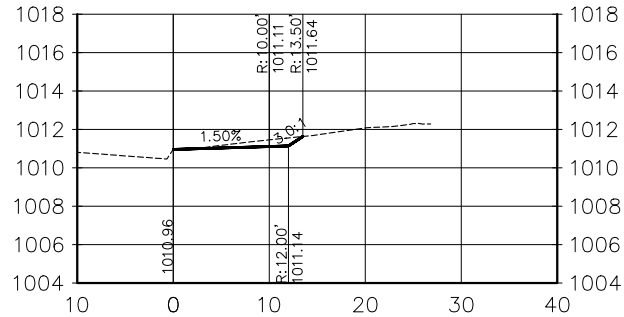
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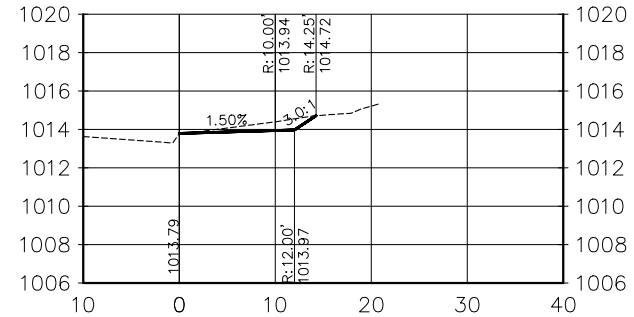
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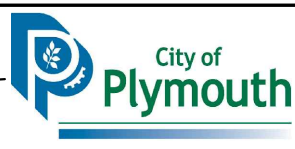
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Michael J. Payne

Date: 3/30/18 License#: 50484



PLYMOUTH, MINNESOTA

MEDINA ROAD & REVERE LANE TRAIL PROJECT

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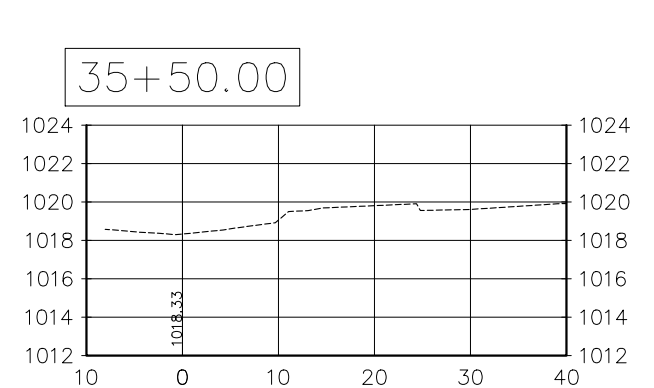
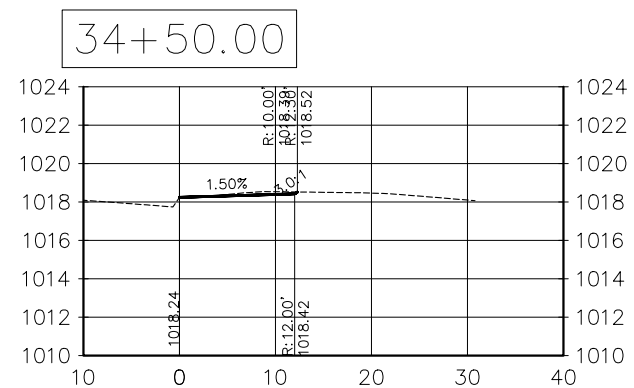
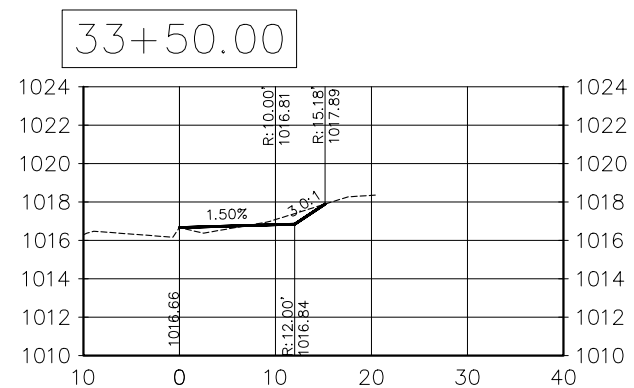
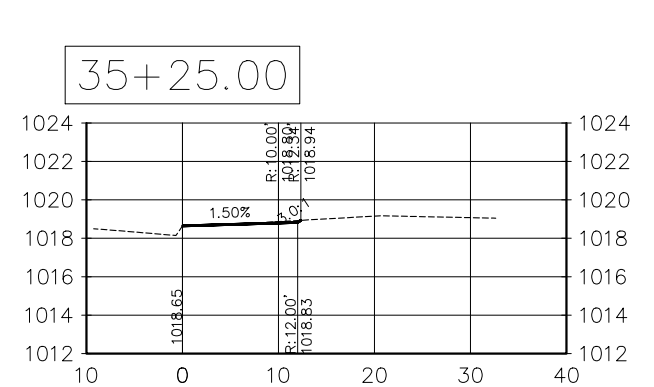
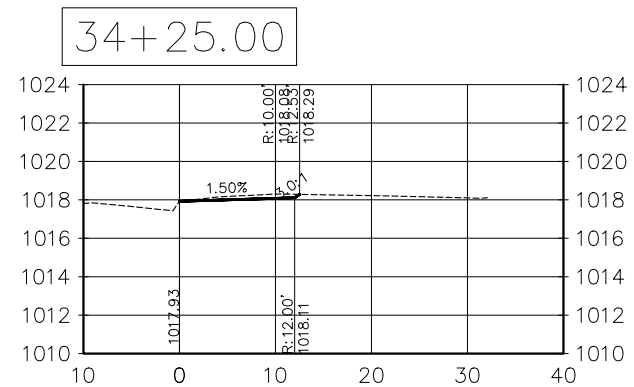
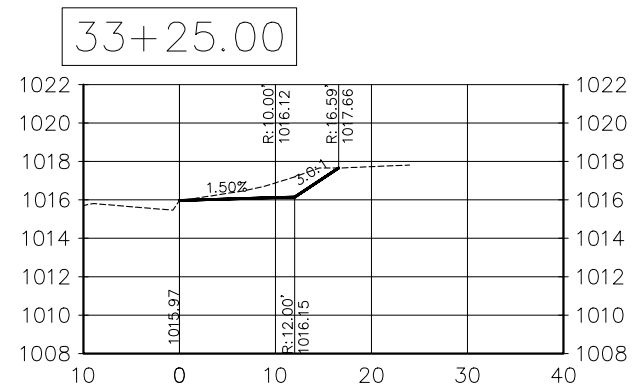
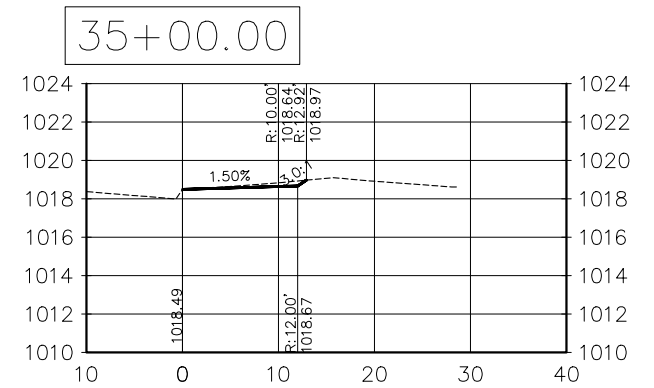
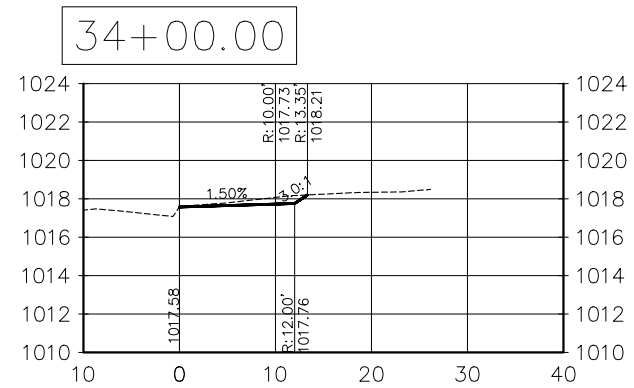
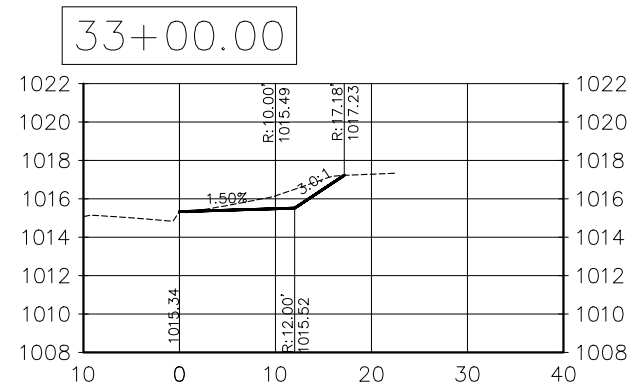
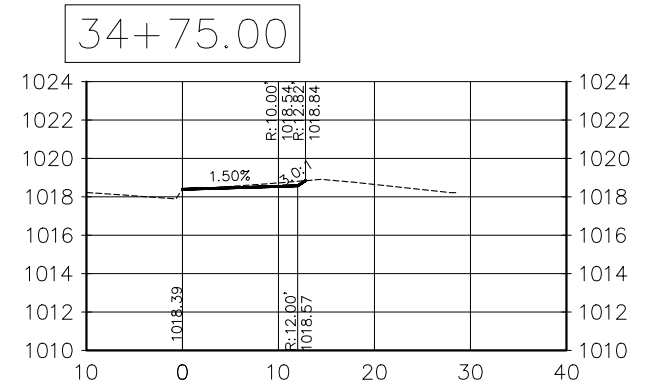
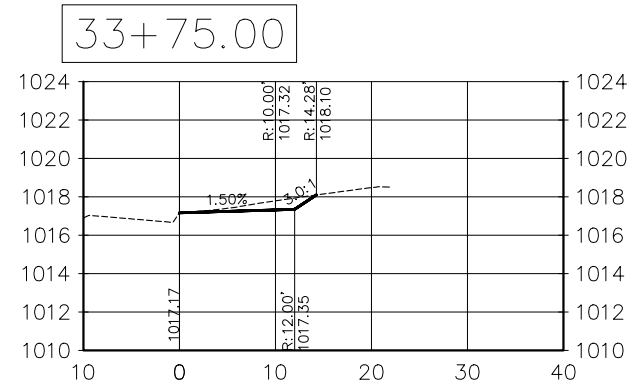
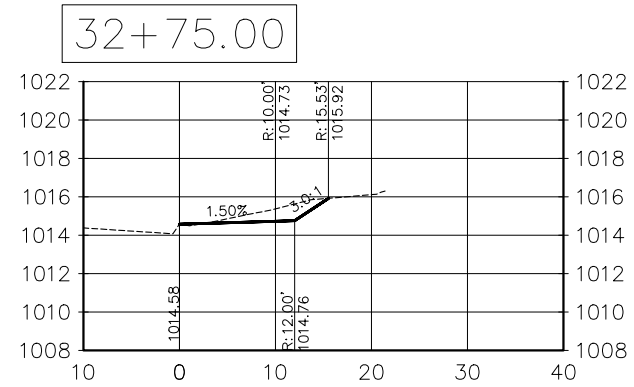
STATE AID PROJECT NO.	DRAWN BY	DATE
###	T. QUAST	3-18
COUNTY PROJECT NO.	DESIGNED BY	
###	M. PAYNE	11-17
CITY PROJECT NO.	CHECKED BY	
PR189001.001 & PR 189001.002	M. PAYNE	3-18
	REVIEWED BY	
	M. PAYNE	3-18

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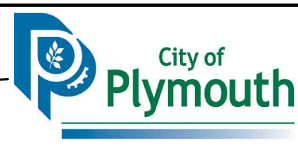
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PLYMOUTH, MINNESOTA

MEDINA ROAD & REVERE LANE TRAIL PROJECT

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