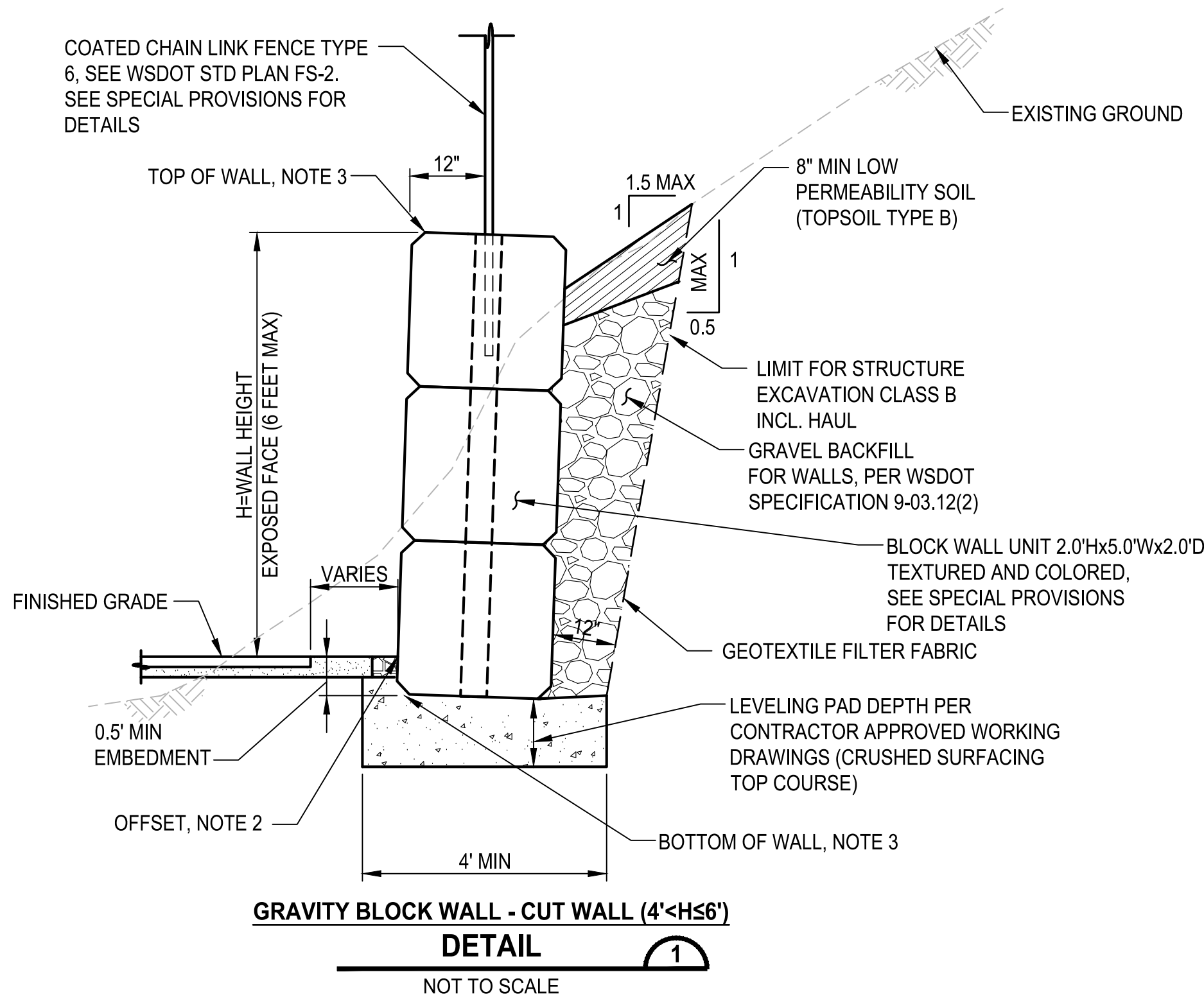


PATH: U:\PSO\Projects\Clients\3047-City of Lakewood\214-3047-013 JBLM North Access\99Svc\3\ADD\DWG PLOTTED BY: loyleket DATE: Monday, February 1, 2021 5:40:47 PM LAYOUT: WD1

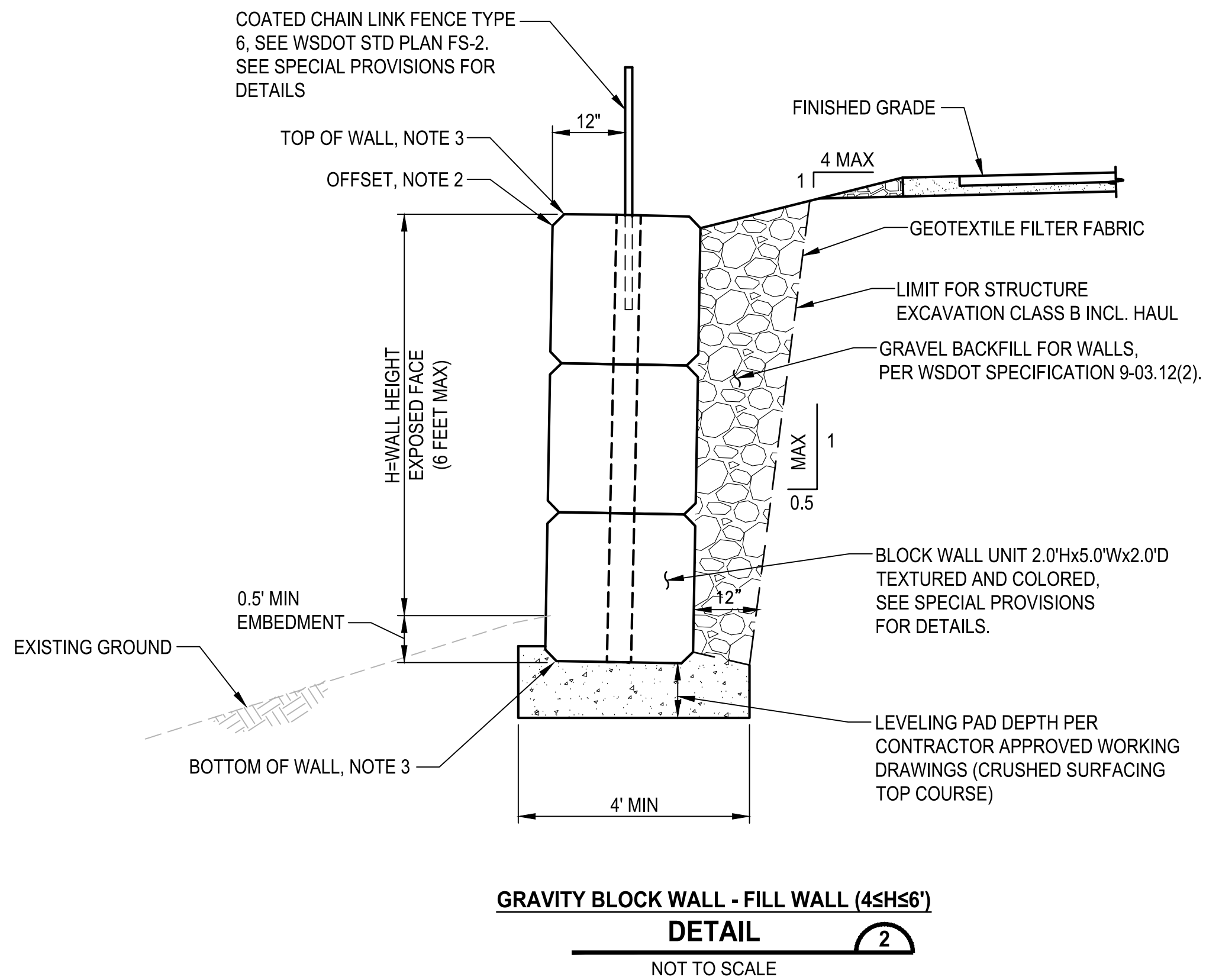


NOTES:

1. RESTORE DISTURBED EXISTING GROUND WITH NATIVE SOIL BACKFILL AND SEEDING, ANY LANDSCAPING SHALL BE OFFSET 2 FEET MIN FROM FACE OF WALL.
2. FOR FILL WALLS, OFFSET DISTANCE SHOWN ON THE WALL LAYOUT PLAN IS AT OUTSIDE EDGE OF THE TOP BLOCK. FOR CUT WALLS, OFFSET DISTANCE SHOWN ON THE WALL LAYOUT PLAN IS AT THE BOTTOM OF EXPOSED WALL FACE.
3. SEE WA SHEETS FOR TOP AND BOTTOM OF WALL ELEVATIONS.
4. FILL BLOCK UNITS HOLLOW CORES WITH GROUT. SEE SPECIAL PROVISIONS FOR WALL DESIGN REQUIREMENTS. ALL CONSTRUCTION MUST CONFORM TO MANUFACTURER'S SPECIFIC REQUIREMENTS.

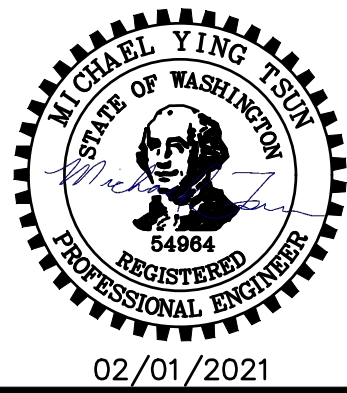
DESIGN LOAD FOR FILL WALLS

LIVELOAD FOR SIDEWALK	100 PSF
DEADLOAD	NONE



REVISIONS	DATE	BY	DESIGNED
			M. TSUN
			DRAWN
			B. PURGANAN
			CHECKED
			D. PROCTOR
			APPROVED
			A. FISHER

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS3047013-WD01
JOB No. 214-3047-013
DATE FEBRUARY 2021



PROJECT NAME
JBLM NORTH ACCESS ROAD IMPROVEMENTS - PHASE 1
LAKEWOOD, WASHINGTON

WALL DETAILS

DRAWING NO.
136 OF 153

WD1

VETERANS
DRIVE

TRAFFIC IMPACT NOTES

FOR THE PURPOSE OF COORDINATING UTILITY RELOCATION AND REDUCTION OF IMPACT TO TRAVELING PUBLIC, THE CITY HAS INCORPORATED THE STAGING AND TRAFFIC CONTROL PLANS FOR THE CONSTRUCTION OF THE INTERSECTION OF ALL IMPROVEMENTS CONSTRUCTED UNDER THIS PROJECT. THE CONTRACTOR SHALL FOLLOW THIS PLAN OR SUBMIT A SEPARATE PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO DIVERTING TRAFFIC.

TOP LIFT OF ASPHALT AND CHANNELIZATION FOR SECTION OF GRAVELLY LAKE DRIVE SOUTH OF NYANZA ROAD AND FOR THE SECTION OF NYANZA ROAD NORTH OF GRAVELLY LAKE DRIVE SHALL BE COMPLETED BETWEEN THE HOURS OF 10 P.M. AND 4 A.M.

ACCESS TO THE LOCAL RESIDENTS SHALL BE MADE PASSABLE AT ALL TIMES. THE CONTRACTOR SHALL KEEP RESIDENTS INFORMED AS TO HOW TO ACCESS THEIR PROPERTY DURING CONSTRUCTION.

TRAFFIC CONTROL PLANS IN USE

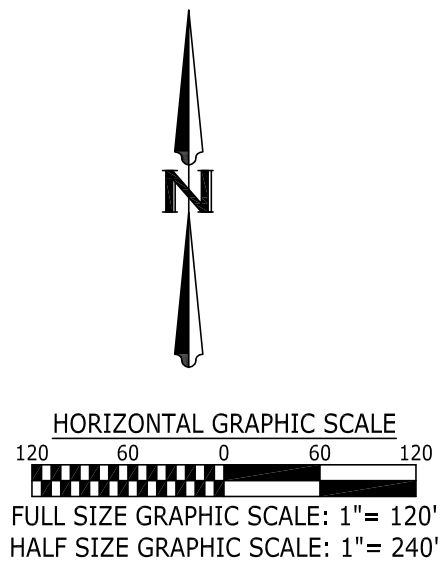
TC1
TC2

CONSTRUCTION SEQUENCING

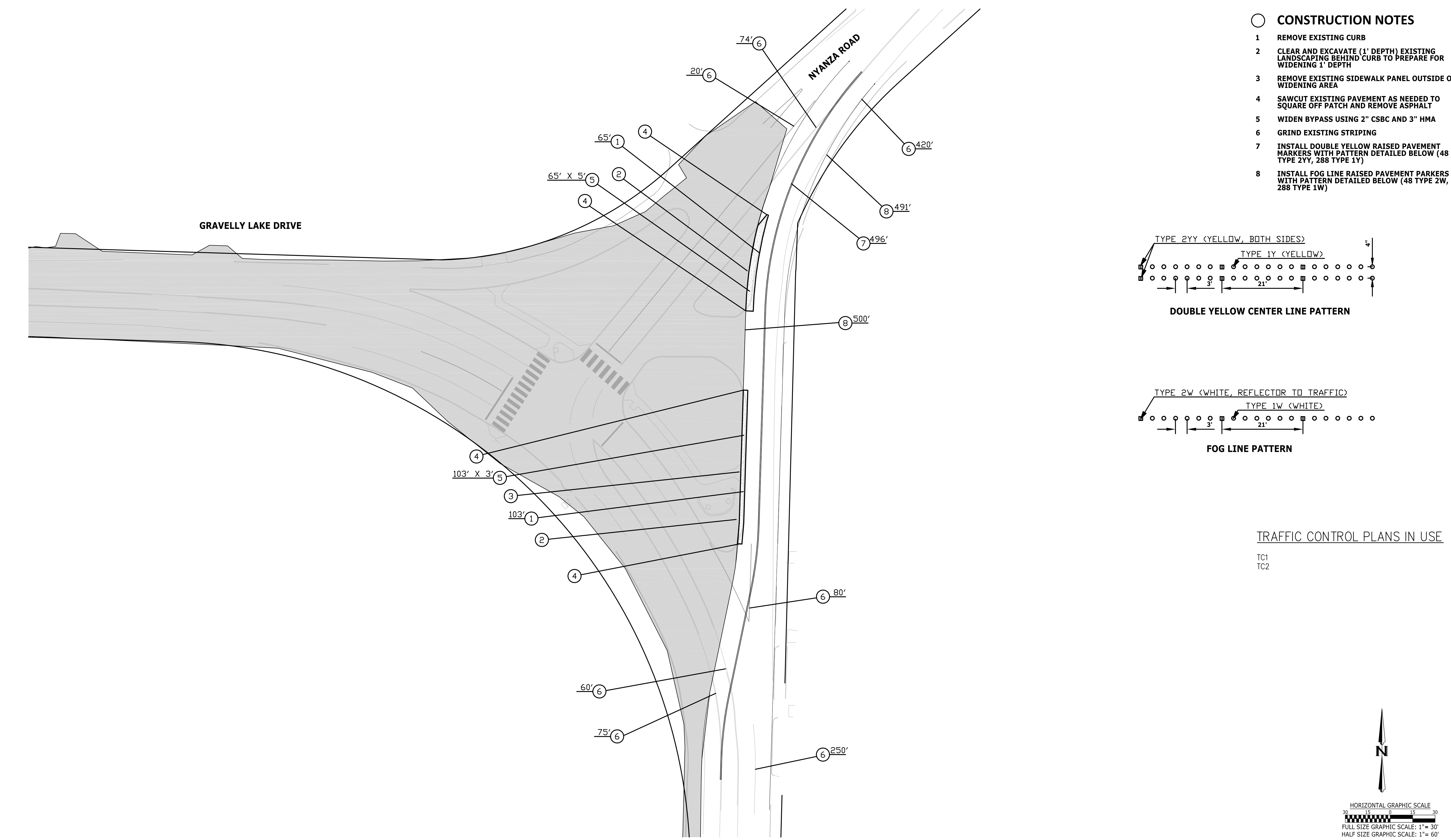
- STAGE 1:
- 1) CLOSE THE EXISTING NORTHBOUND SLIP LANE FROM GRAVELLY LAKE DRIVE TO NYANZA ROAD. CONSTRUCT THE WATER MAIN FROM STA 1057+28 TO 1063+29. SAWCUT THE PAVEMENT AS SHOWN ON DRAWING ST2 AND WIDEN THE EXISTING LANES. WITHIN ONE CALENDAR DAY OF COMMENCING DEMOLITION WORK, RESTRIPE CENTER LINE AS SHOWN ON ST2. RECHANNELIZATION AND SWITCHING OF TRAFFIC CONTROL SHALL BE DONE BETWEEN THE HOURS OF 10 P.M. AND 4 A.M.
 - 2) SET UP THE DETOUR ROUTE SIGNAGE AS SHOWN ON DRAWING TC1 AND COMPLETE SPEED HUMPS SHOWN ON TC9.
 - 3) CLOSE GRAVELLY LAKE DRIVE BETWEEN NYANZA ROAD AND THE SOUTH LEG OF VETERANS DRIVE. LOCAL ACCESS IS VIA THE INTERSECTION AT VETERANS DRIVE ONLY.
 - 4) COMPLETE THE WATER MAIN UP TO THE TIE IN AT WASHINGTON BOULEVARD.
 - 5) COMPLETE ALL WORK IN THE SHADED AREA BELOW THROUGH THE BASE LIFT OF PAVEMENT.

GRAVELLY LAKE DRIVE

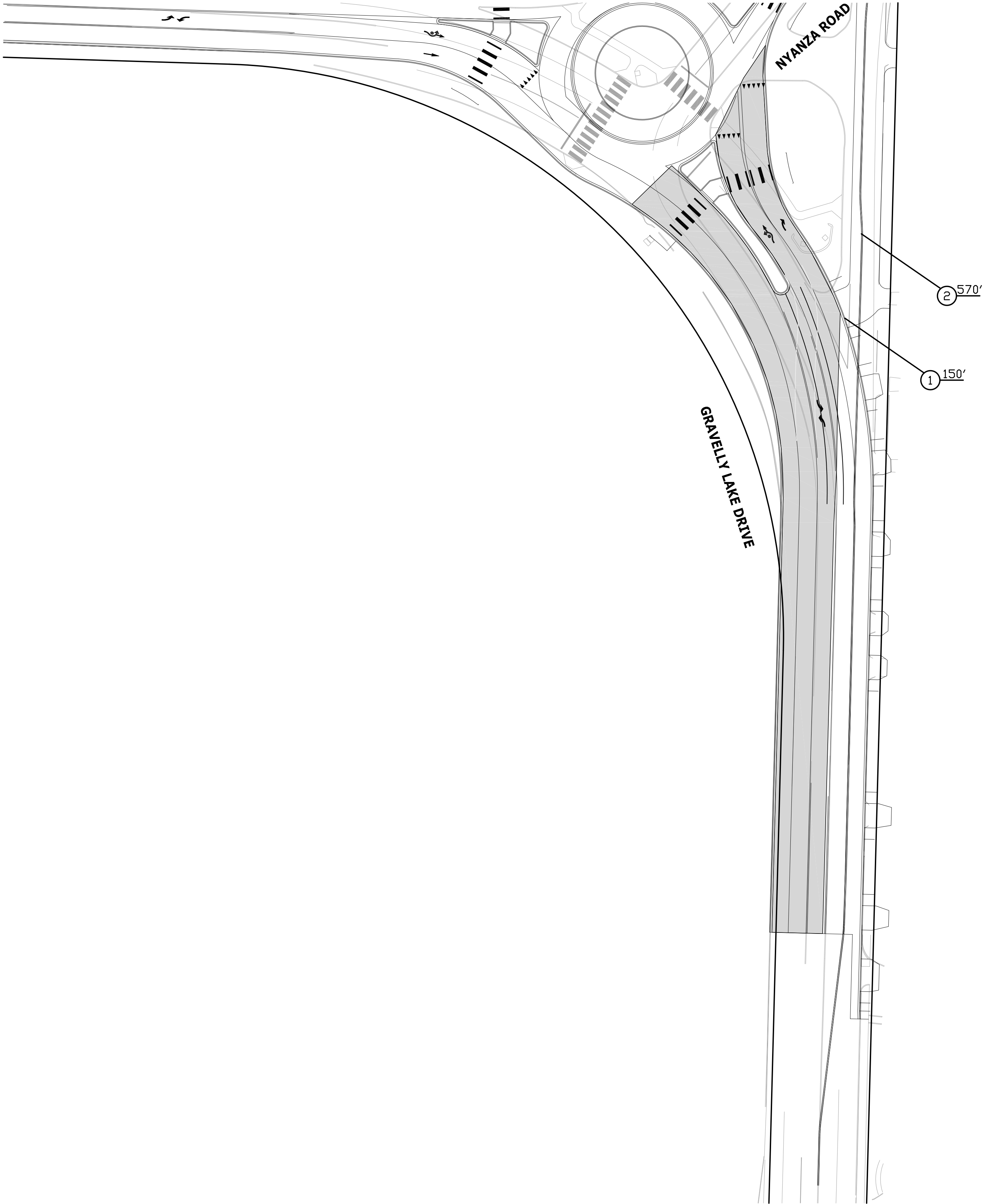
NYANZA ROAD



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	 	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
△				Drawn By: T. POKSWINSKI		Drawing Name: STAGING PLAN - STAGE 1	Drawing No. ST1
△				Checked By: W. OTT			Sheet 137 of 153
△				Approved By: P. BUCICH			
△				Project Start Date: 3/1/20 Drawing Scale: AS SHOWN			
△				Electronic File Name: 302.0077			



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	<div></div> <div></div>	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI		Drawing Name: STAGING PLAN - STAGE 1 - NYANZA INTERSECTION PREPARATION	Drawing No. ST2
				Checked By: W. OTT			
				Approved By: P. BUCICH			
				Project Start Date: 3/1/20			
				Drawing Scale: AS SHOWN			
				Electronic File Name: 302.0077			Sheet 138 of 153



CONSTRUCTION NOTES

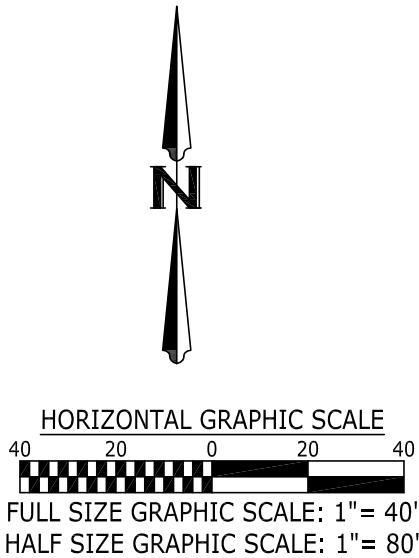
- 1 REMOVE RAISED PAVEMENT MARKERS
- 2 INSTALL DOUBLE YELLOW TEMPORARY TRAFFIC STRIPING TAPE

CONSTRUCTION SEQUENCING

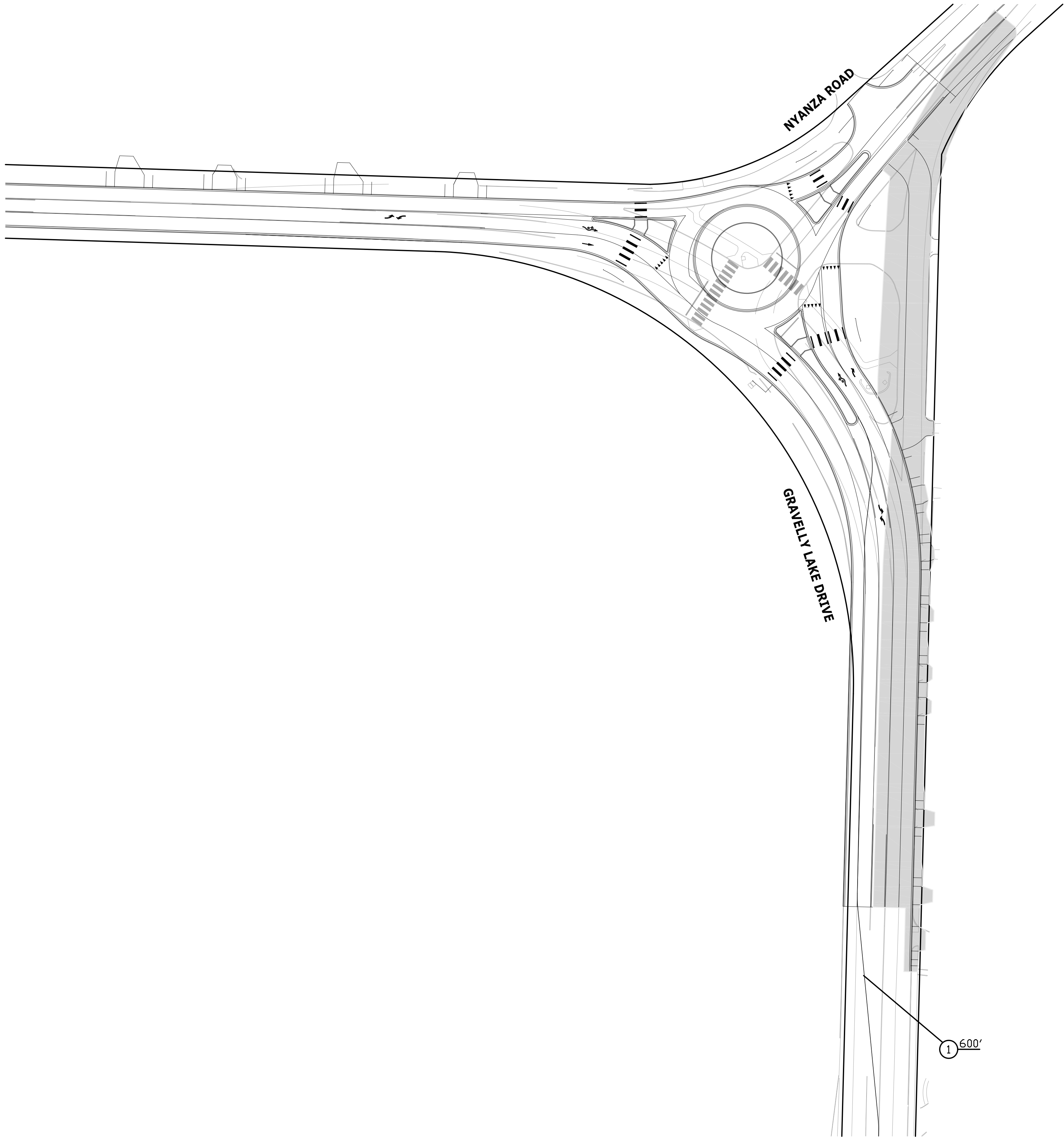
- STAGE 2:
- 1) ONCE COMPLETION OF THE IMPROVEMENTS OF PHASE 1 ARE NEARING COMPLETION (BASE LIFT WITHIN ONE WEEK OF BEING PLACED), MODIFY THE TRAFFIC CONTROL ALONG GRAVELLY LAKE DRIVE SOUTH OF NYANZA AS SHOWN ON THIS SHEET. RECHANNELIZATION AND SWITCHING OF TRAFFIC CONTROL SHALL BE DONE BETWEEN THE HOURS OF 10 P.M. AND 4 A.M.
 - 2) REMOVE EXISTING PAVEMENT AND GRADE FOR BASE COURSE IN SHADED AREA ON THIS SHEET.
 - 3) INSTALL BASE LIFT OF PAVING.

TRAFFIC CONTROL PLANS IN USE

TC1
TC2
TC3



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI			Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI			Drawing Name: STAGING PLAN - STAGE 2 - ROAD REBUILD SOUTH OF NYANZA WEST SIDE	Drawing No. ST3
				Checked By: W. OTT				
				Approved By: P. BUCICH				
				Project Start Date: 3/1/20				
				Drawing Scale: AS SHOWN				
				Electronic File Name: 302.0077				Sheet 139 of 153



CONSTRUCTION NOTES

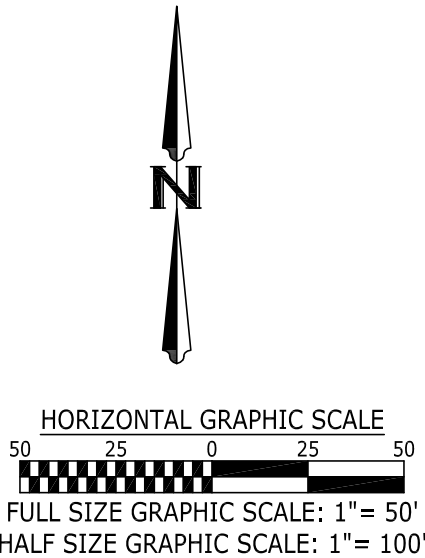
- 1 INSTALL DOUBLE YELLOW TEMPORARY TRAFFIC STRIPING TAPE

CONSTRUCTION SEQUENCING

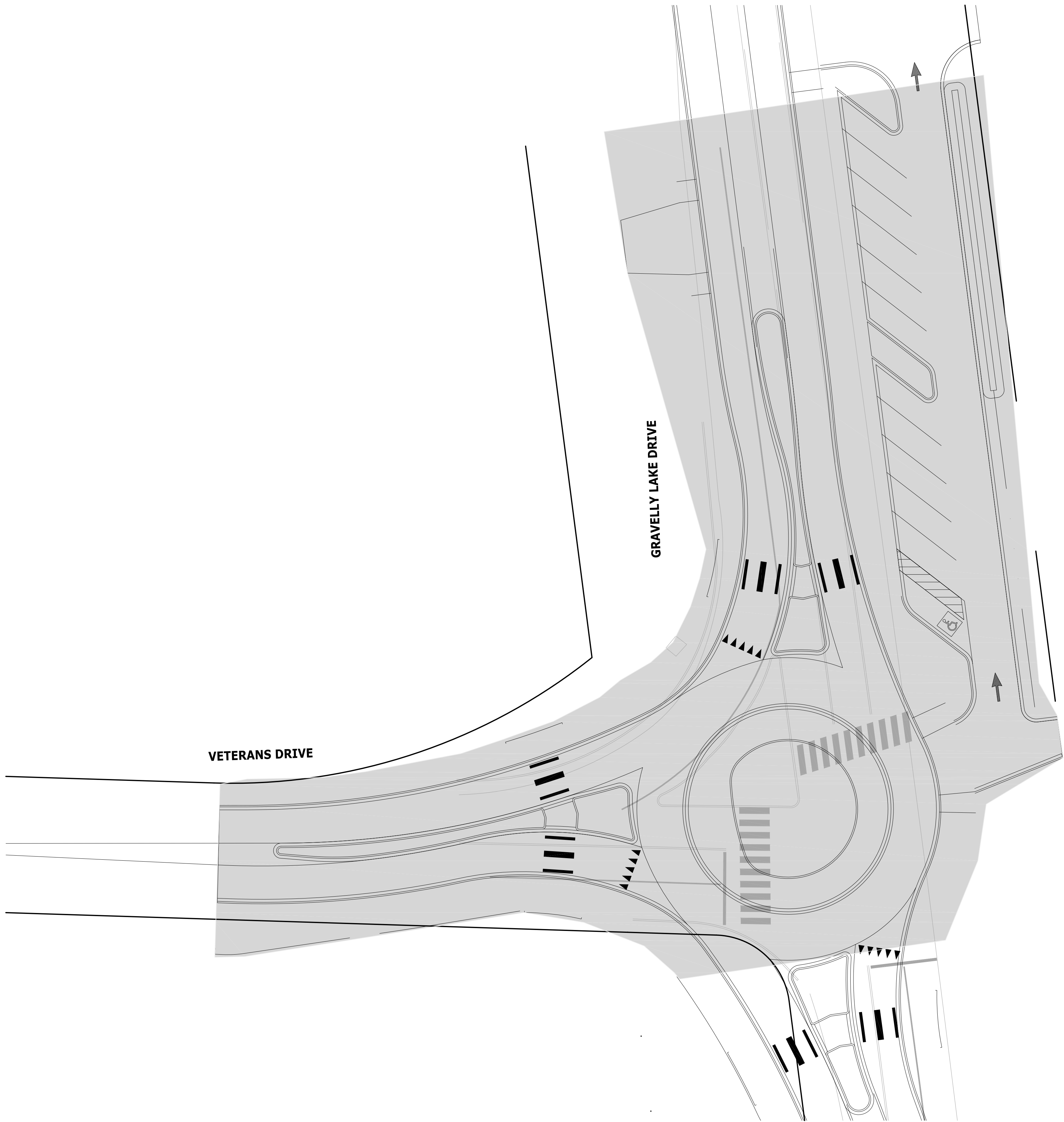
- STAGE 3:
- 1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 2 ARE COMPLETED (BASE LIFT COMPLETED), MODIFY THE TRAFFIC CONTROL ALONG GRAVELLY LAKE DRIVE SOUTH OF NYANZA AS SHOWN ON THIS SHEET. RECHANNELIZATION AND SWITCHING OF TRAFFIC CONTROL FOR THIS STAGE CAN BE DONE AT ANY TIME OF THE DAY.
 - 2) COMPLETE WORK IN THE SHADED AREA THROUGH BASE LIFT OF PAVING. STAGE 3 AND STAGE 4 CAN BE DONE CONCURRENTLY FOLLOWING THE SHIFT IN TRAFFIC NOTED IN STEP 1 ABOVE.
 - 3) ONCE STAGE 4 IS COMPLETED WITH THE TIE IN TO VETERANS, CLOSE THE ROUNDABOUT LEG TO NORTHBOUND NYANZA AT GRAVELLY AND COMPLETE ALL CURB, SIDEWALK AND HMA.

TRAFFIC CONTROL PLANS IN USE

- TC1
TC2
TC4



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI			Project Name:	Job No. 302.0077		
				Drawn By: T. POKSWINSKI			JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I		Drawing No.	
				Checked By: W. OTT					ST4	Sheet of 140 153
				Approved By: P. BUCICH						
				Project Start Date: 3/1/20						
				Drawing Scale: AS SHOWN	STAGING PLAN - STAGE 3 - ROAD REBUILD SOUTH OF NYANZA EAST SIDE					
				Electronic File Name: 302.0077						

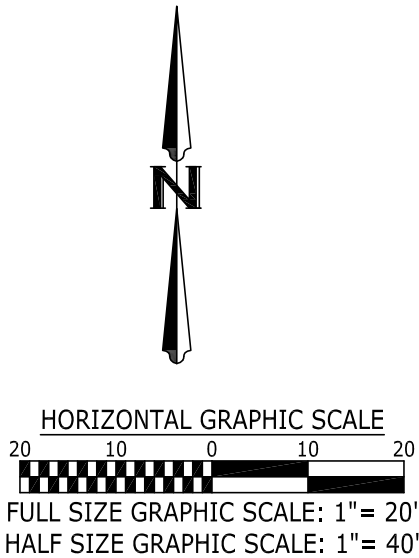


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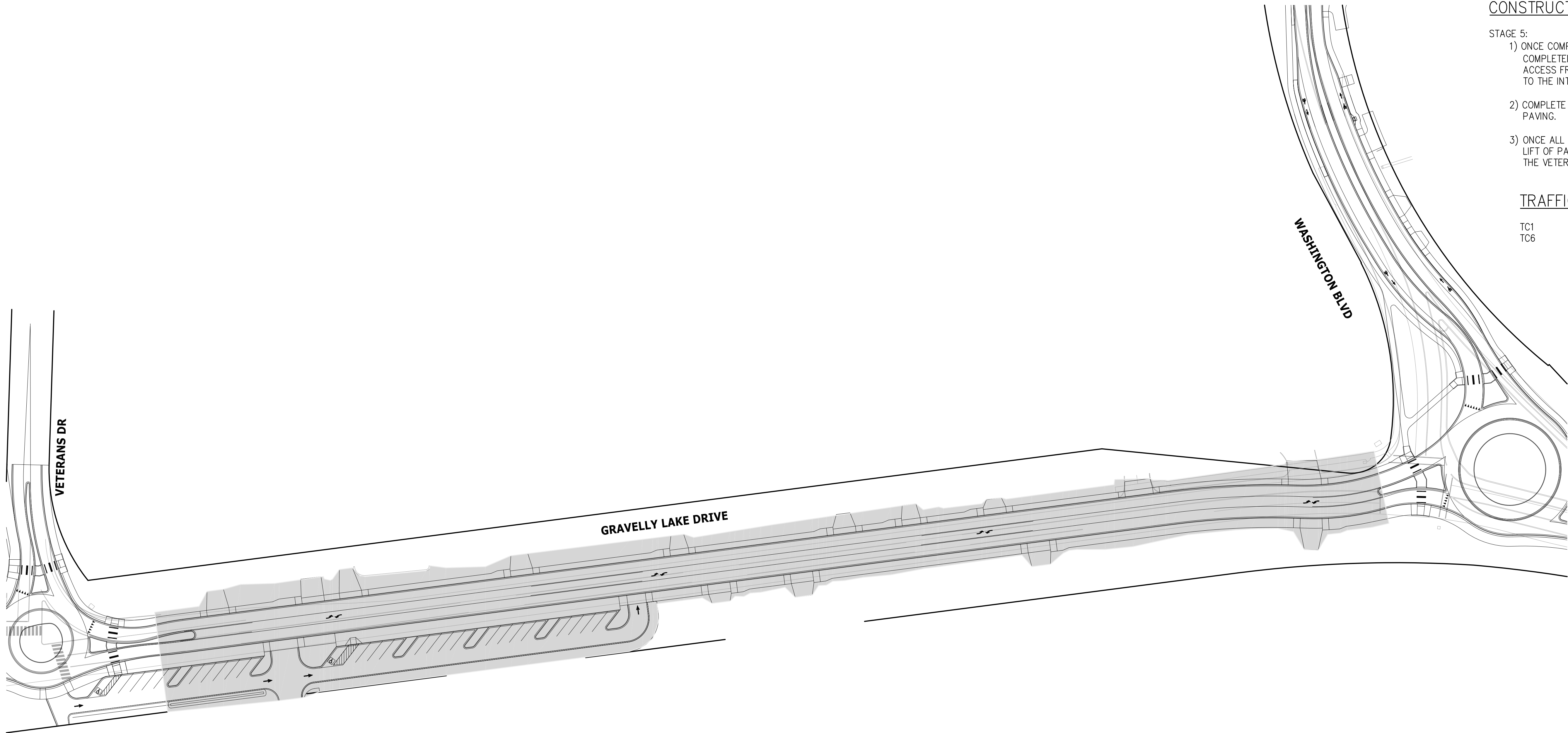
- STAGE 4:
- 1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 2 ARE COMPLETED (BASE LIFT COMPLETED), MODIFY THE LOCAL ACCESS FROM THE INTERSECTION OF VETERANS AND GRAVELLY TO THE INTERSECTION OF GRAVELLY AND NYANZA.
 - 2) COMPLETE WORK IN THE SHADED AREA THROUGH BASE LIFT OF PAVING.
 - 3) ONCE ALL WORK IN STAGE 4 IS COMPLETED, COMPLETE THE TOP LIFT OF PAVEMENT FOR ALL WORK ON THE PROJECT SOUTH OF THE VETERANS DRIVE INTERSECTION.

TRAFFIC CONTROL PLANS IN USE

TC1
TC5



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	 	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI			Drawing No. ST5
				Checked By: W. OTT		Drawing Name: STAGING PLAN - STAGE 4 - VETERANS DR/GRAVELLY LK DR ROUNDABOUT	Sheet 141 of 153
				Approved By: P. BUCICH			
				Project Start Date: 3/1/20			
				Drawing Scale: AS SHOWN			
				Electronic File Name: 302.0077			

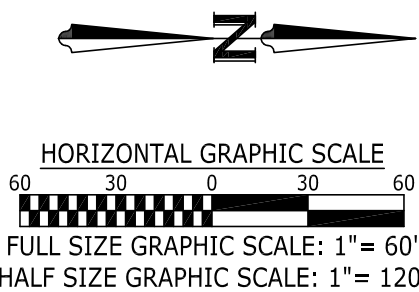


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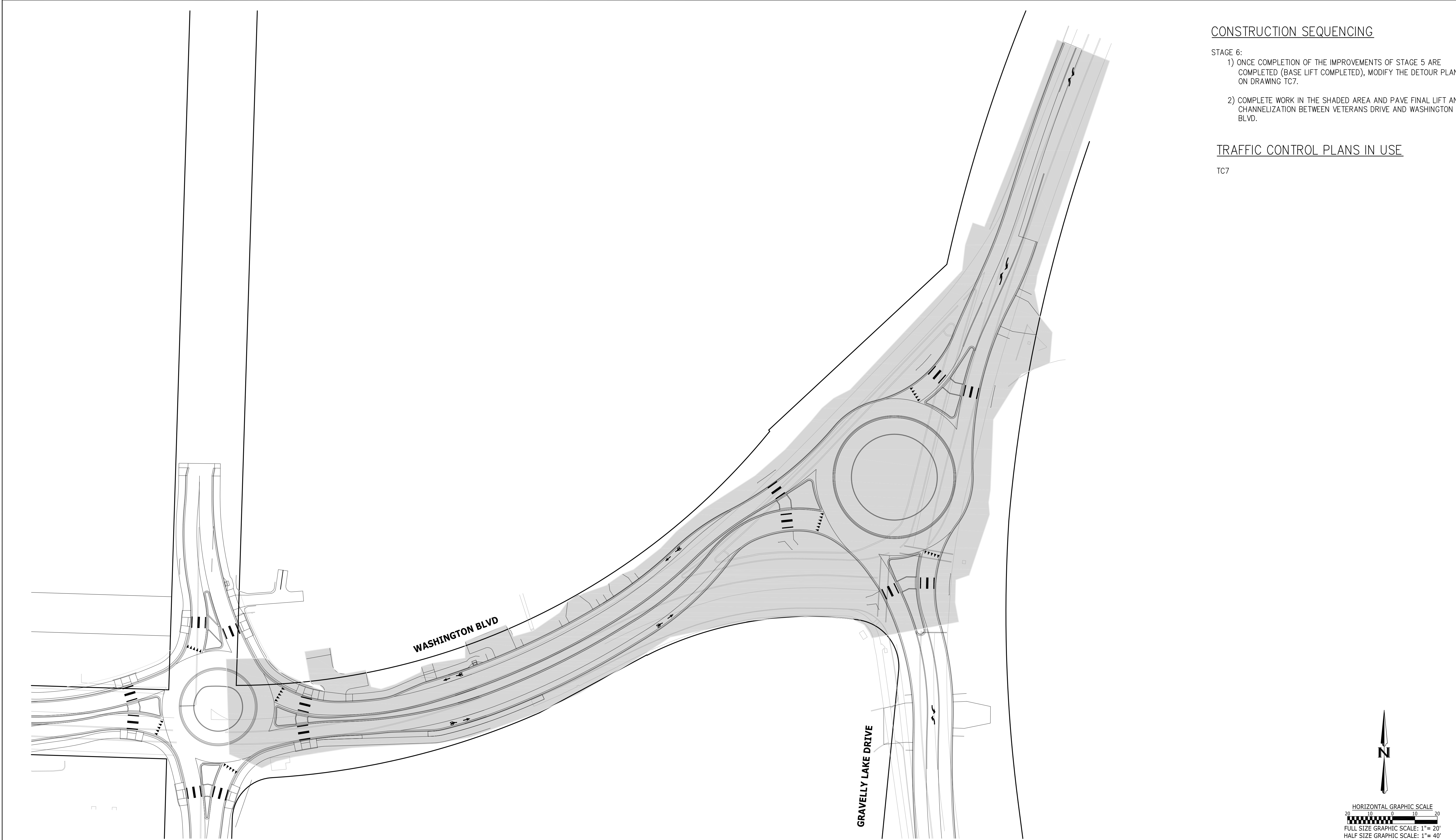
- STAGE 5:
- 1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 4 ARE COMPLETED (SUBSTANTIALLY COMPLETED), MODIFY THE LOCAL ACCESS FROM THE INTERSECTION OF VETERANS AND GRAVELLY TO THE INTERSECTION OF GRAVELLY AND NYANZA.
 - 2) COMPLETE WORK IN THE SHADED AREA THROUGH BASE LIFT OF PAVING.
 - 3) ONCE ALL WORK IN STAGE 4 IS COMPLETED, COMPLETE THE TOP LIFT OF PAVEMENT FOR ALL WORK ON THE PROJECT SOUTH OF THE VETERANS DRIVE INTERSECTION.

TRAFFIC CONTROL PLANS IN USE

TC1
TC6



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	<div></div>	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI			Drawing No. ST6
				Checked By: W. OTT			
				Approved By: P. BUCICH			
				Project Start Date: 3/1/20		Drawing Scale: AS SHOWN	
				Electronic File Name: 302.0077		STAGING PLAN - STAGE 5 - GRAVELLY LAKE - VETERANS TO WASHINGTON	Sheet 142 of 153



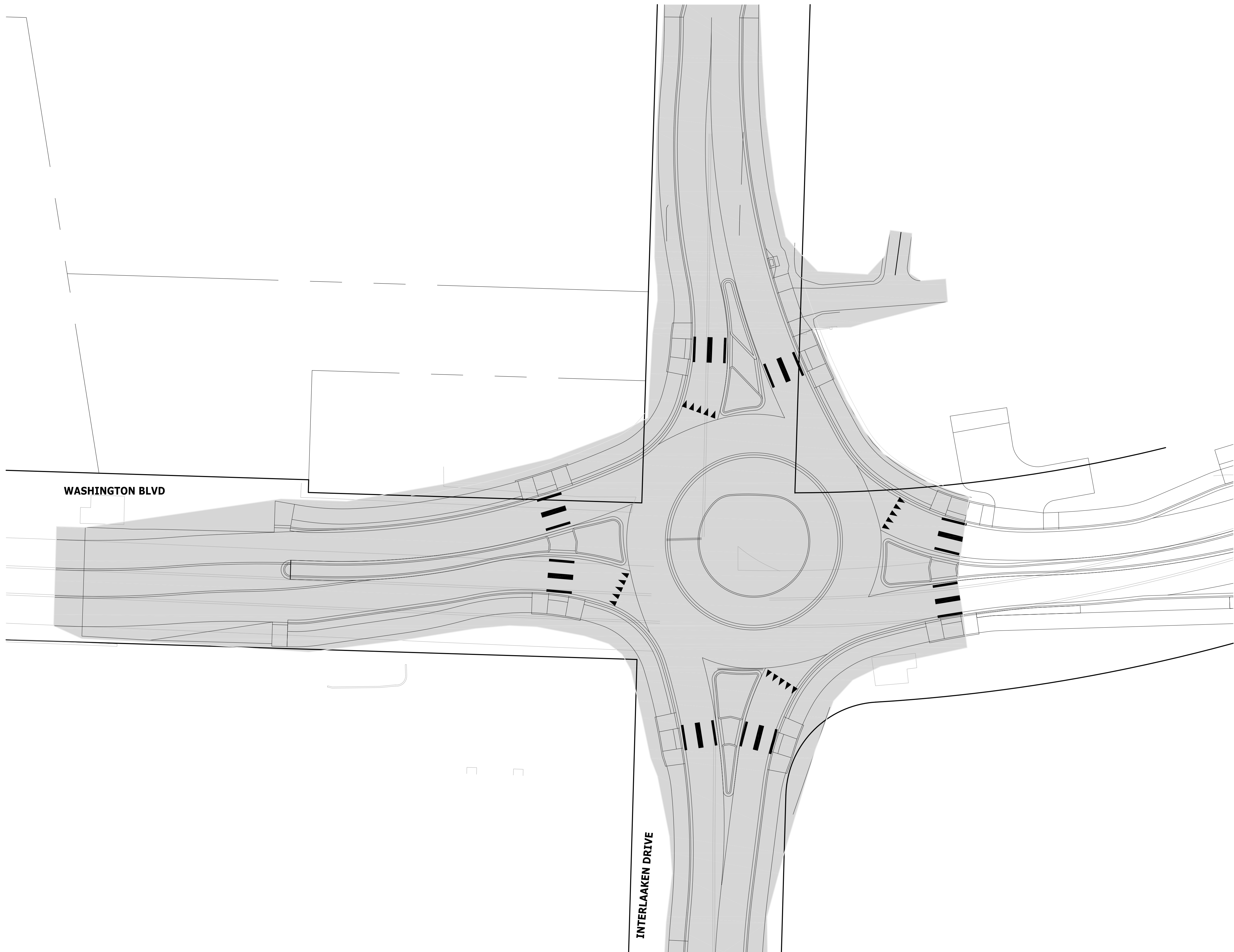
CONSTRUCTION SEQUENCING

- STAGE 6:
- 1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 5 ARE COMPLETED (BASE LIFT COMPLETED), MODIFY THE DETOUR PLAN ON DRAWING TC7.
 - 2) COMPLETE WORK IN THE SHADED AREA AND PAVE FINAL LIFT AND CHANNELIZATION BETWEEN VETERANS DRIVE AND WASHINGTON BLVD.

TRAFFIC CONTROL PLANS IN USE

TC7

No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	<div></div>	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI		Drawing Name: STAGING PLAN - STAGE 4 - WASHINGTON/GRAVELLY LK DR ROUNDABOUT	Drawing No. ST7
				Checked By: W. OTT			
				Approved By: P. BUCICH			
				Project Start Date: 3/1/20			
				Drawing Scale: AS SHOWN			
				Electronic File Name: 302.0077			Sheet 143 of 153

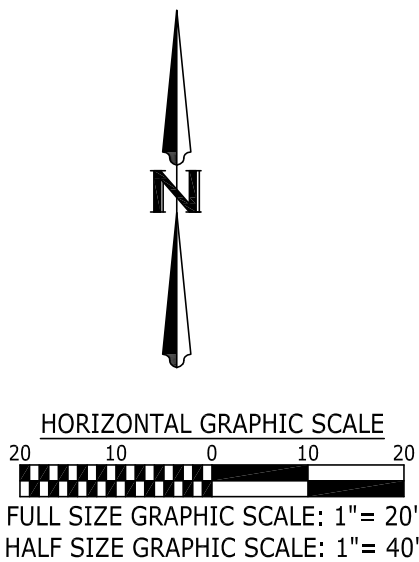


CONSTRUCTION SEQUENCING

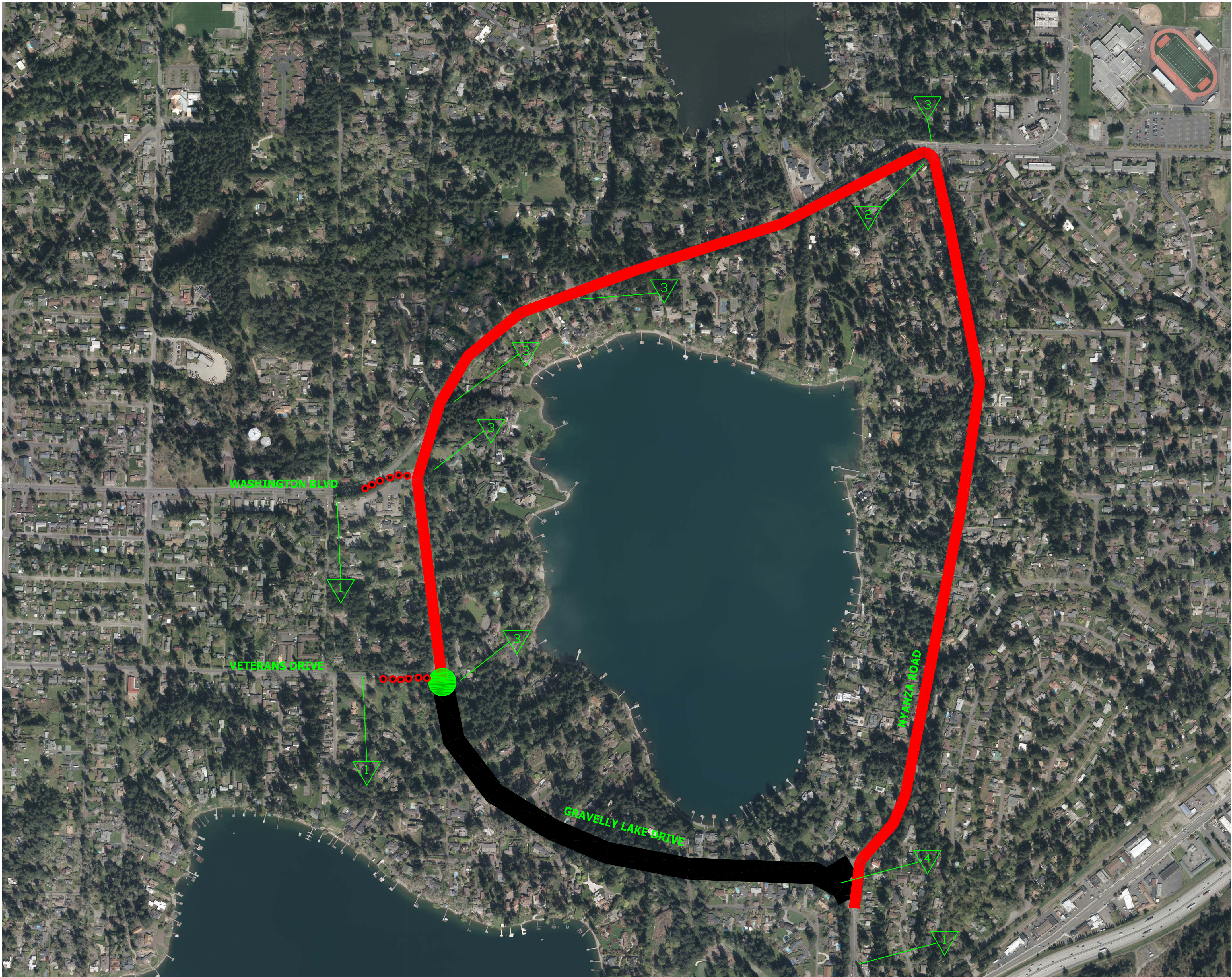
- STAGE 7:
- 1) ONCE COMPLETION OF THE IMPROVEMENTS OF STAGE 6 ARE COMPLETED (BASE LIFT COMPLETED), MODIFY THE DETOUR PLAN ACCORDING TO TC8.
 - 2) COMPLETE WORK IN THE SHADED AREA.

TRAFFIC CONTROL PLANS IN USE

TC8



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI			Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI			Drawing Name: STAGING PLAN - STAGE 7 - WASHINGTON/INTERLAAKEN ROUNDABOUT	Drawing No. ST8
				Checked By: W. OTT				
				Approved By: P. BUCICH				
				Project Start Date: 3/1/20				
				Drawing Scale: AS SHOWN				
				Electronic File Name: 302.0077				Sheet 144 of 153



LEGEND

- DETOUR ROUTE
- ROAD CLOSURE
- POINT OF LOCAL ACCESS
- CLOSE RIGHT TURN LANE OFF WITH LIGHTED BARRELS

TRAFFIC CONTROL NOTES:

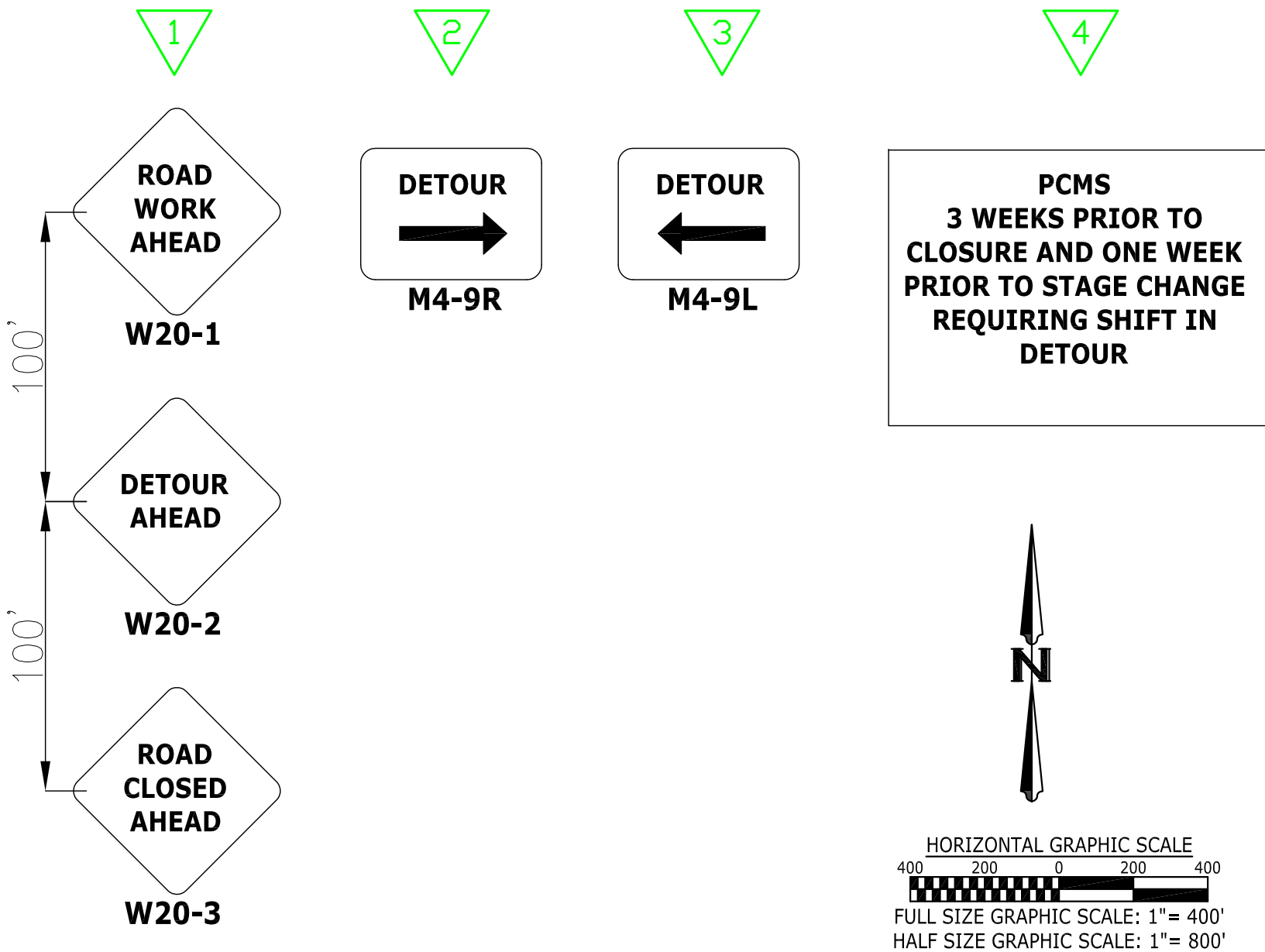
PCMS SHALL BE INSTALLED THREE WEEKS PRIOR TO ROAD CLOSURE AND REMOVED UPON ROAD CLOSURE. SIGN SHALL BE SET UP WITH THE FOLLOWING MESSAGE:
SCREEN 1:
GRAVELLY
CLOSED @
NYANZA

SCREEN 2:
BEG (INSERT DATE; I.E. 4/15)
USE
DETOUR

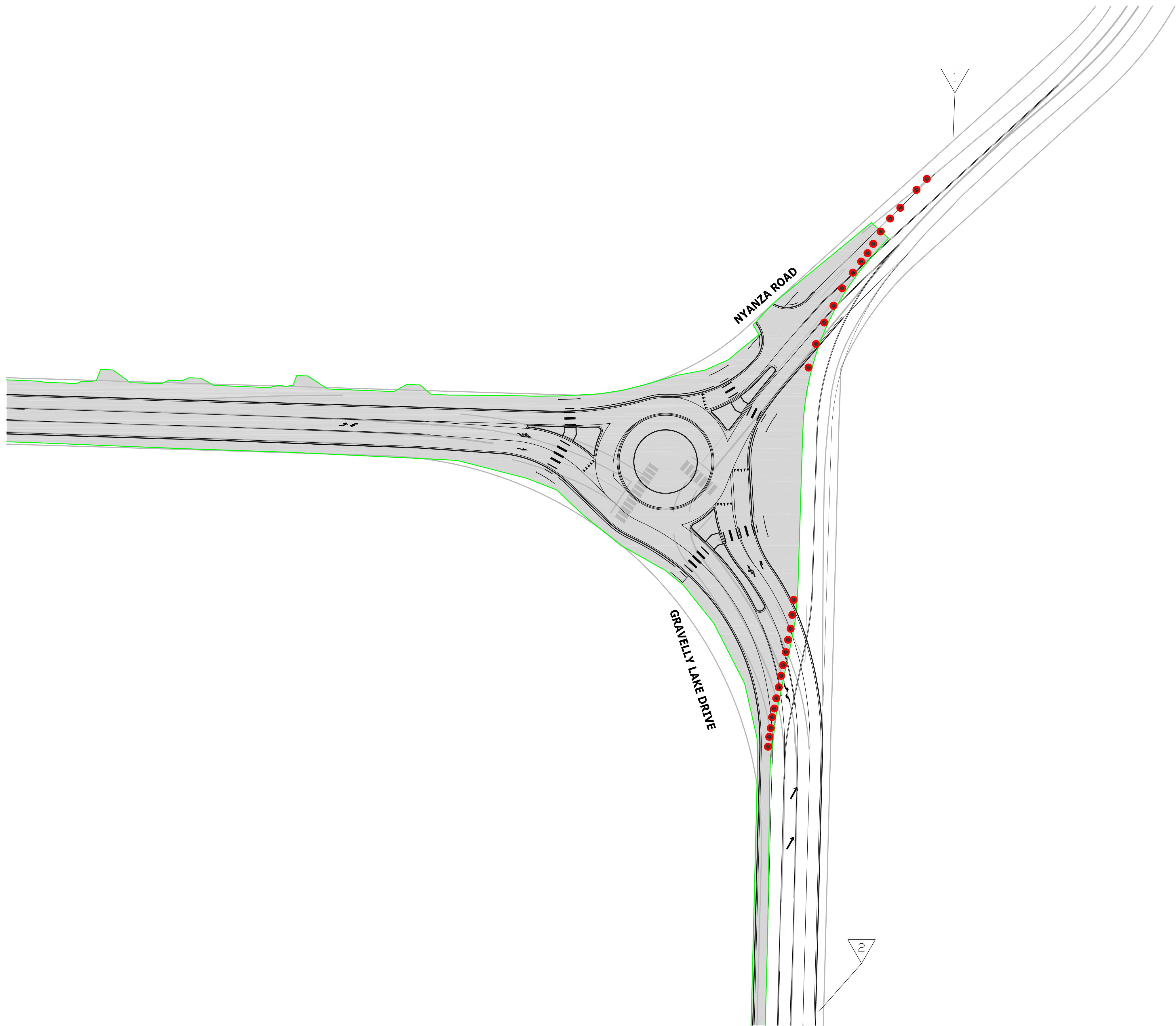
ROAD CLOSURES SHALL CONSIST OF TYPE III BARRICADES AT EACH END OF THE CLOSURE.

FOR STAGE 1, THE CLOSURE MEANS THAT BARRICADES WILL NEED TO BE COMPLETED COMPLETELY ACROSS NYANZA, NOT ALLOWING TRAFFIC IN TO THE CLOSURE. THE CLOSURE AT VETERANS DRIVE SHALL CONSIST OF A SINGLE TYPE III BARRICADE WITH ROAD CLOSED SIGN AND LOCAL TRAFFIC ONLY SIGN, PLACED IN THE MIDDLE OF THE ROAD SO TRAFFIC CAN PASS ON EITHER SIDE OF THE BARRICADE.

TRAFFIC CONTROL SIGN SCHEDULE



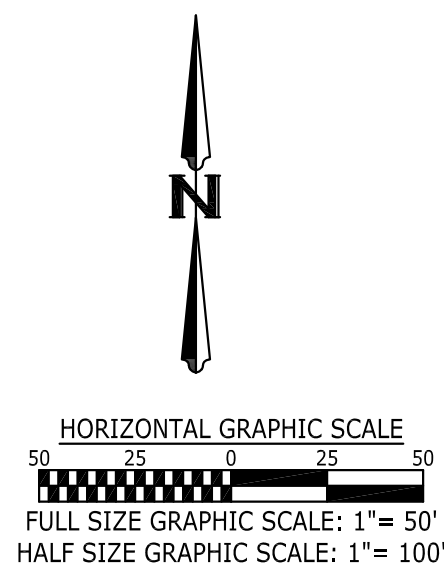
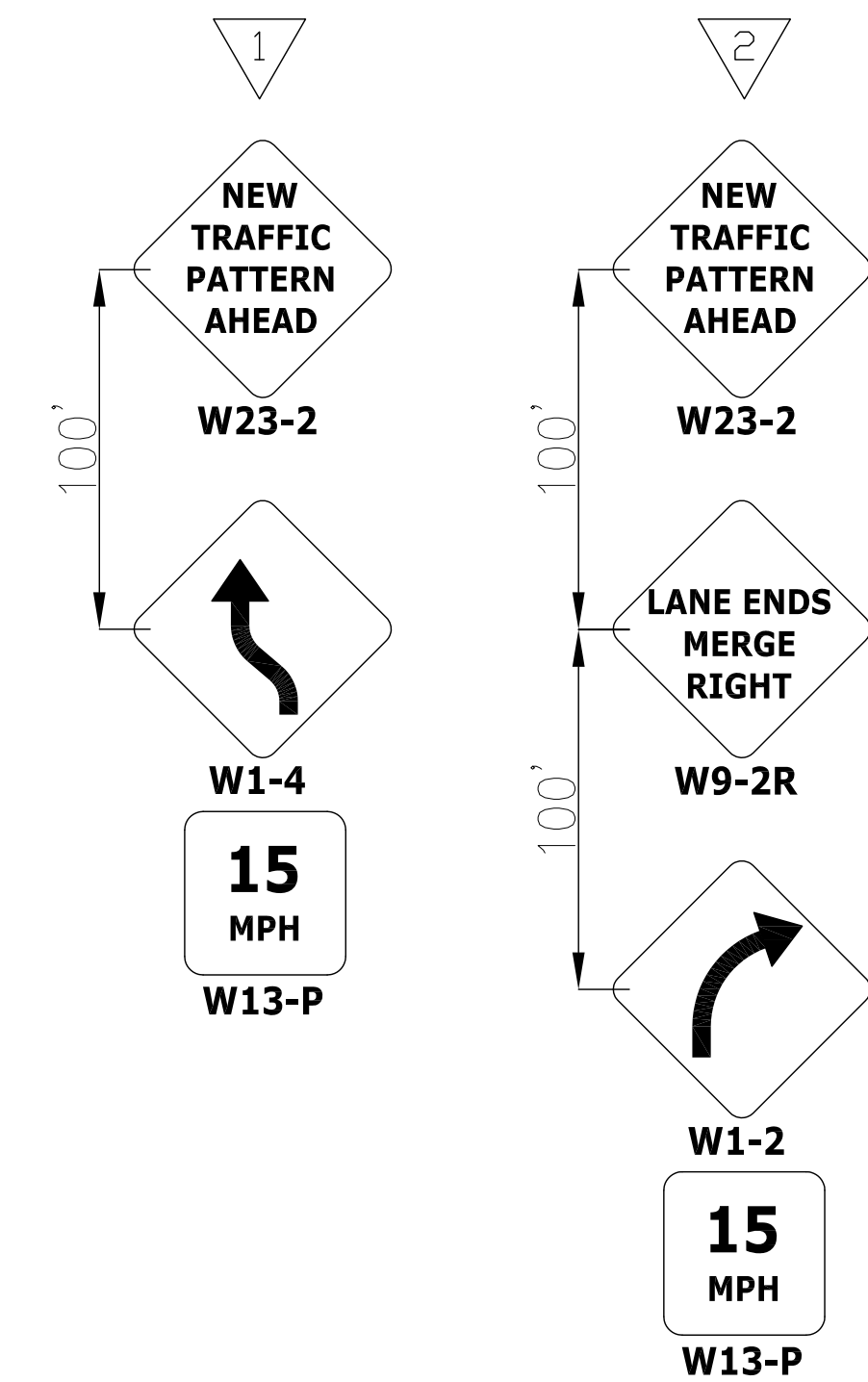
No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI			Project Name:	Job No.
				Drawn By: T. POKSWINSKI			JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	302.0077
				Checked By: W. OTT			Drawing Name:	Drawing No.
				Approved By: P. BUCICH			TRAFFIC CONTROL PLAN - STAGE 1 THROUGH 5 DETOUR	TC1
				Project Start Date: Drawing Scale: 3/1/20 AS SHOWN			Sheet	of
				Electronic File Name: 302.0077			145	153



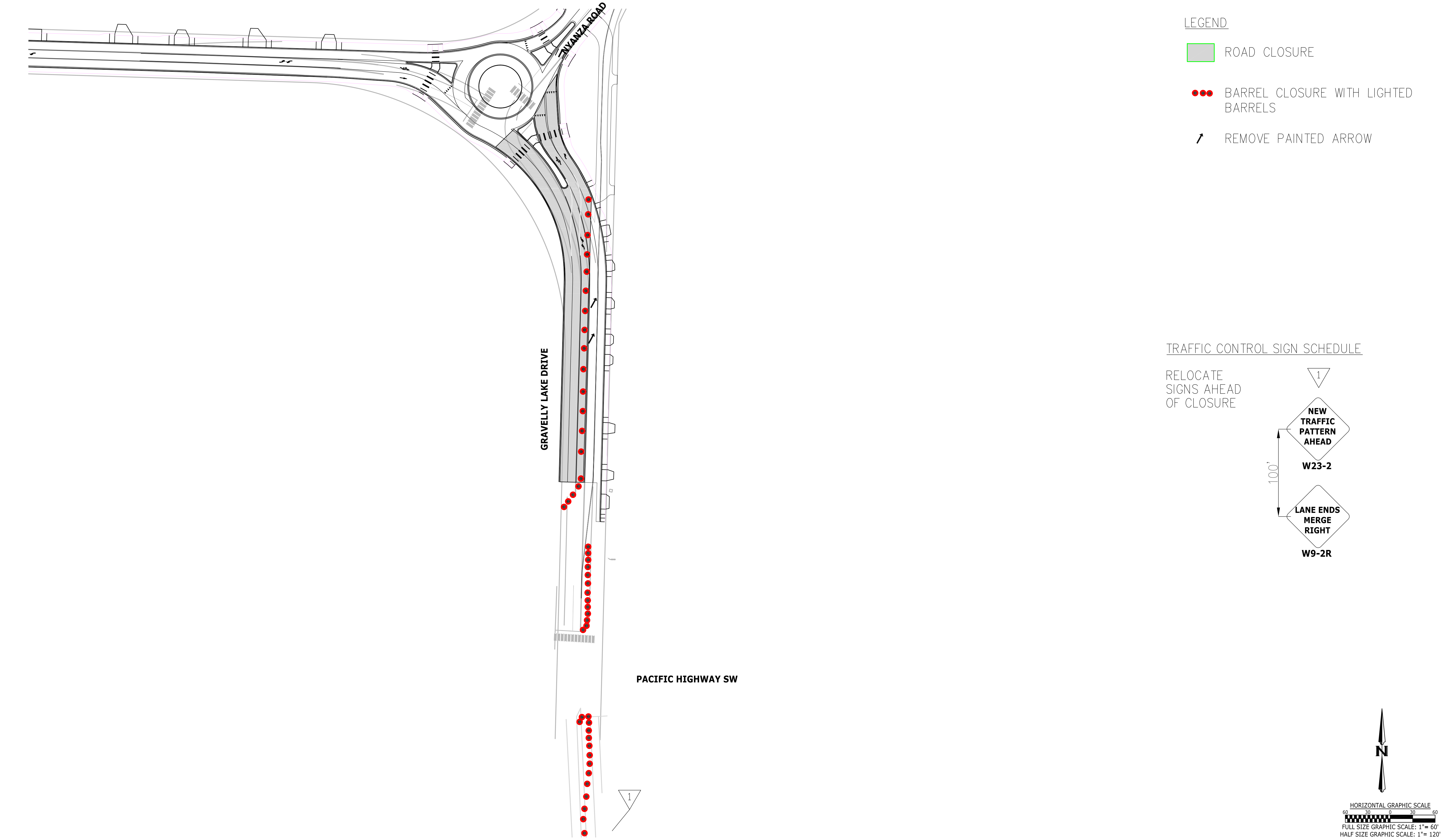
LEGEND

- ROAD CLOSURE
- BARREL CLOSURE WITH LIGHTED BARRELS
- PAINTED ARROW

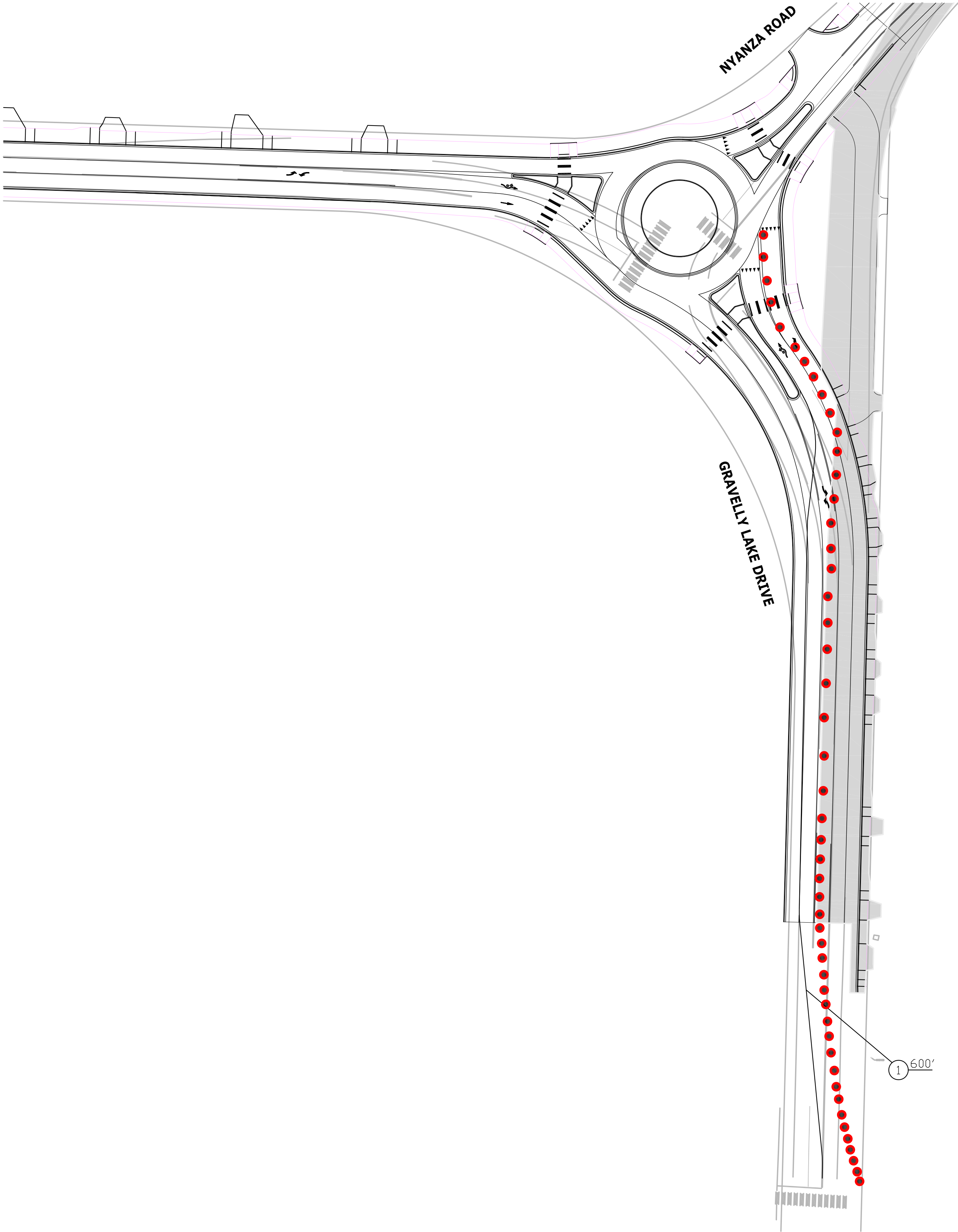
TRAFFIC CONTROL SIGN SCHEDULE



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	 	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI		Drawing Name: TRAFFIC CONTROL PLAN - STAGE 1 - NYANZA/GRAVELLY INTERSECTION	Drawing No. TC2
				Checked By: W. OTT			
				Approved By: P. BUCICH			
				Project Start Date: 3/1/20			
				Drawing Scale: AS SHOWN			
				Electronic File Name: 302.0077			Sheet 146 of 153



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	<div><div><div>2/2/21</div></div></div>	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI		Drawing Name:	Drawing No. TC3
				Checked By: W. OTT		TRAFFIC CONTROL PLAN - STAGE 2	Sheet 147 of 153
				Approved By: P. BUCICH			
				Project Start Date: 3/1/20			
				Drawing Scale: AS SHOWN			
				Electronic File Name: 302.0077			



LEGEND

ROAD CLOSURE

BARREL CLOSURE WITH LIGHTED BARRELS

CONSTRUCTION NOTES

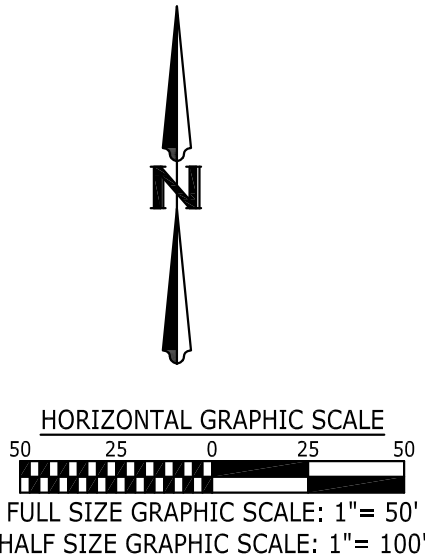
1. INSTALL DOUBLE YELLOW TEMPORARY TRAFFIC STRIPING TAPE

TRAFFIC CONTROL NOTES

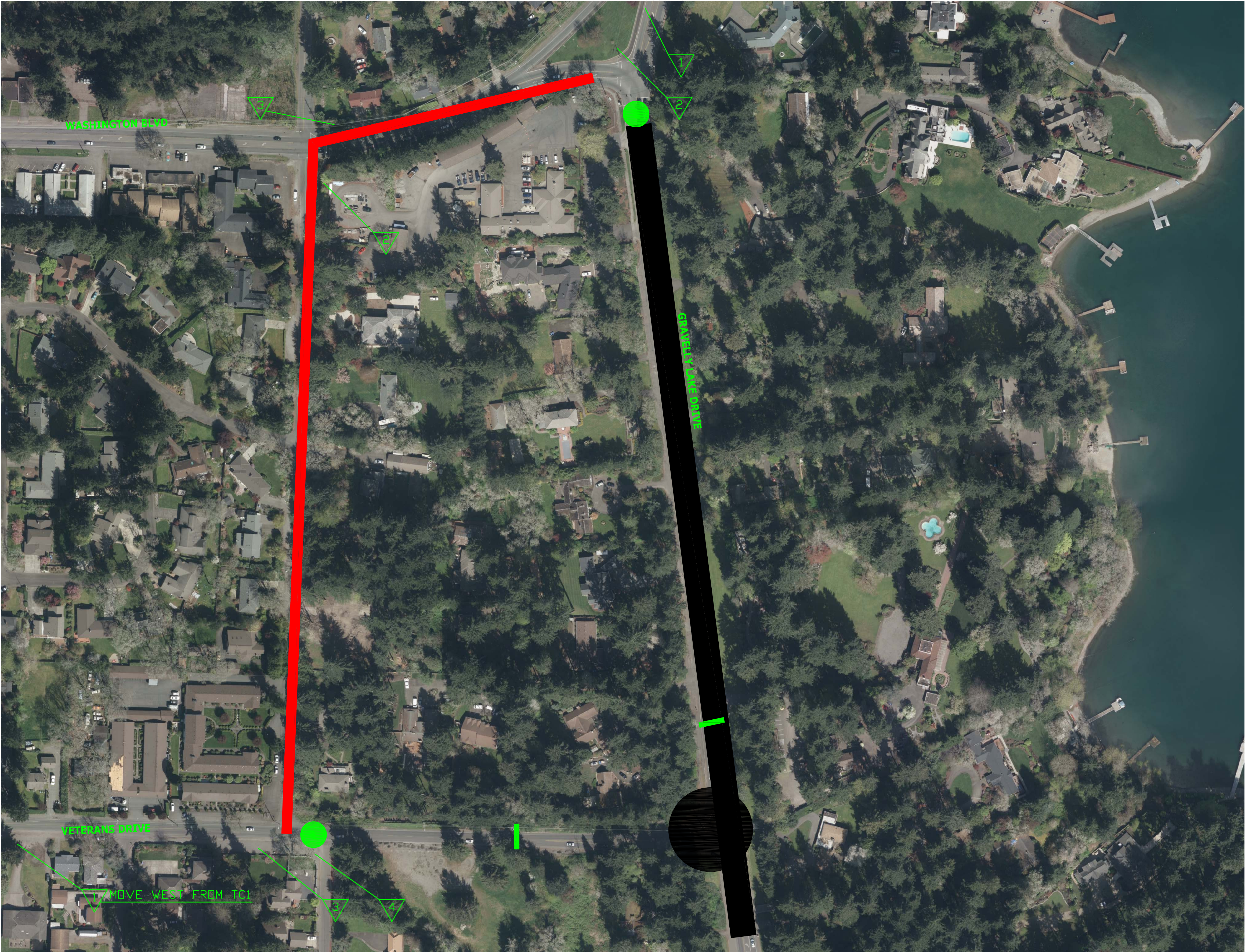
REMOVE ALL SIGNS SHOWN ON TC2. KEEP SIGNS AND BARRELS SOUTH OF PACIFIC HIGHWAY SHOWN ON TC3..

FOR WORK ON THE NYANZA NORTH LEG OF THE ROUNDABOUT, CLOSE THE NYANZA LEG OF THE ROUNDABOUT. SWITCH DETOUR SIGNS AT THE NORTH END OF THE NYANZA/GRAVELLY INTERSECTION AND DETOUR TRAFFIC ALONG GRAVELLY NORTH TO VETERANS. PROVIDE PCMS ONE WEEK PRIOR TO SHIFT TO LET PUBLIC KNOW OF THE DETOUR REVISION.

FINAL LIFT OF PAVEMENT AND STRIPING SHALL BE DONE UNDER FULL CLOSURE OF GRAVELLY AND NYANZA. PREPAVING MEETING IS REQUIRED WITH THE CITY TO DISCUSS WORK BEING DONE BETWEEN THE HOURS OF 10 P.M. AND 4 A.M. AND TRAFFIC CONTROL.



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	 	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI			
				Checked By: W. OTT			Drawing No. TC4
				Approved By: P. BUCICH		Drawing Name: TRAFFIC CONTROL PLAN - STAGE 3	Sheet 148 of 153
				Project Start Date: 3/1/20 Drawing Scale: AS SHOWN			
				Electronic File Name: 302.0077			



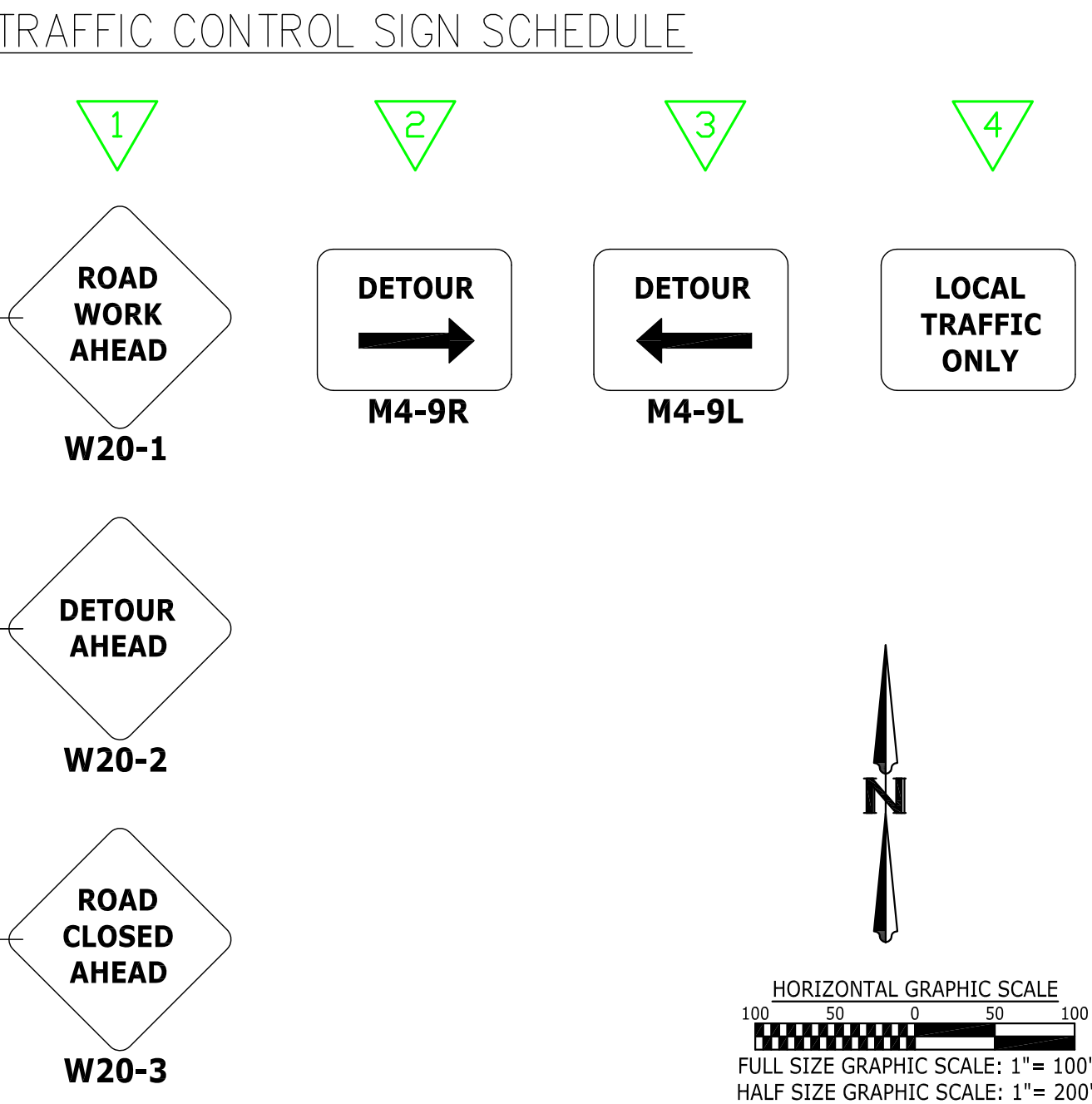
- LEGEND
- DETOUR ROUTE
 - ROAD CLOSURE
 - POINT OF LOCAL ACCESS
 - BARRICADE BLOCKING COMPLETE ROAD ON GRAVELLY, LOCAL ACCESS ON VETERANS EAST OF INTERLAAKEN

TRAFFIC CONTROL NOTES

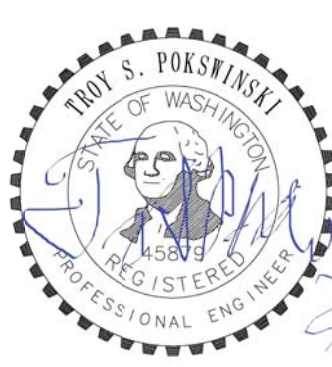
ALL PREVIOUS DETOURS ARE STILL IN PLACE FOR STAGE 4. THIS ADDITIONAL DETOUR IS ADDED TO REMOVE TRAFFIC FROM GRAVELLY LAKE DRIVE FROM VETERANS TO WASHINGTON IN ORDER TO CONSTRUCT THE ROUNDABOUT AT VETERANS.

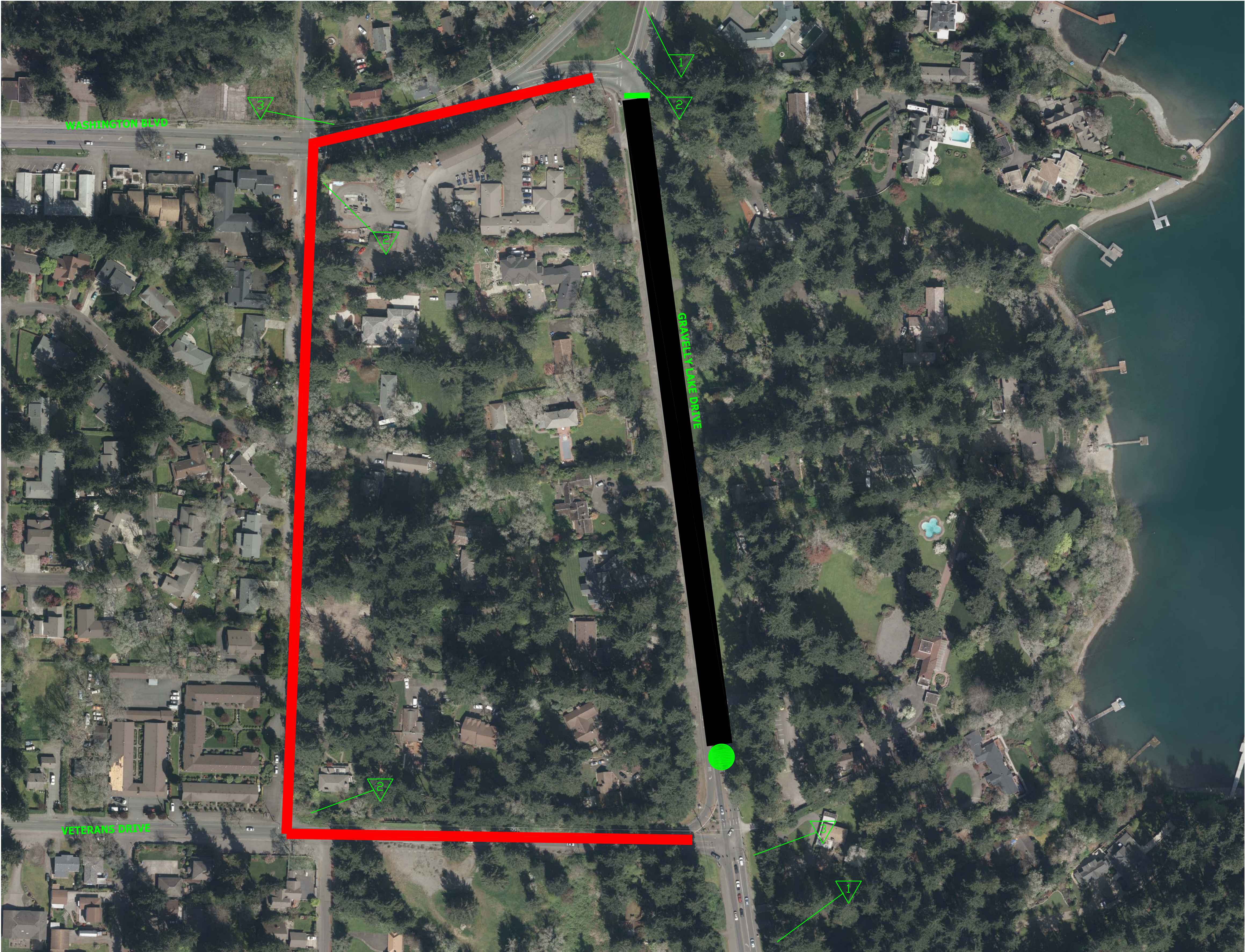
LOCAL ACCESS IS REQUIRED ON VETERANS JUST EAST OF INTERLAAKEN AND ON GRAVELLY JUST SOUTH OF WASHINGTON.

CITY SHALL MONITOR TRAFFIC CONDITIONS AT THE INTERSECTIONS OF VETERANS/INTERLAAKEN AND WASHINGTON/INTERLAAKEN IN THE EVENT ALL-WAY STOPS ARE NEEDED.



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
△				Drawn By: T. POKSWINSKI	Drawing Name: TRAFFIC CONTROL PLAN - STAGE 4	Drawing No. TC5
△				Checked By: W. OTT		Sheet 149 of 153
△				Approved By: P. BUCICH		
△				Project Start Date: 3/1/20		
△				Drawing Scale: AS SHOWN		
△				Electronic File Name: 302.0077		





- LEGEND
- DETOUR ROUTE
 - ROAD CLOSURE
 - POINT OF LOCAL ACCESS
 - TYPE III BARRICADES COMPLETELY BLOCKING GRAVELLY LAKE DRIVE

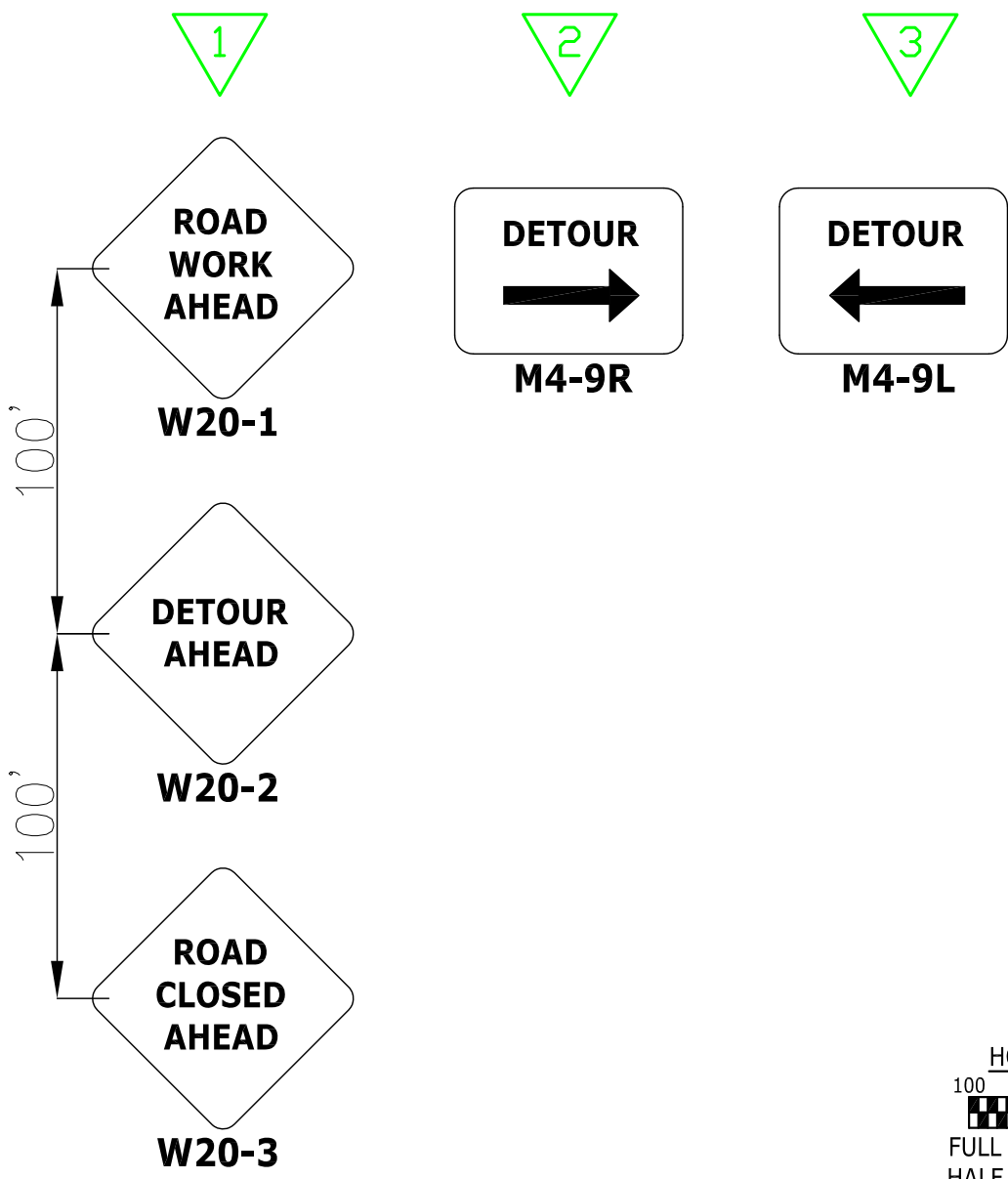
TRAFFIC CONTROL NOTES

REMOVE ALL PREVIOUS DETOURS.

LOCAL ACCESS IS ALONG GRAVELLY LAKE DRIVE JUST NORTH OF THE WASHINGTON/VETERANS ROUNDABOUT.

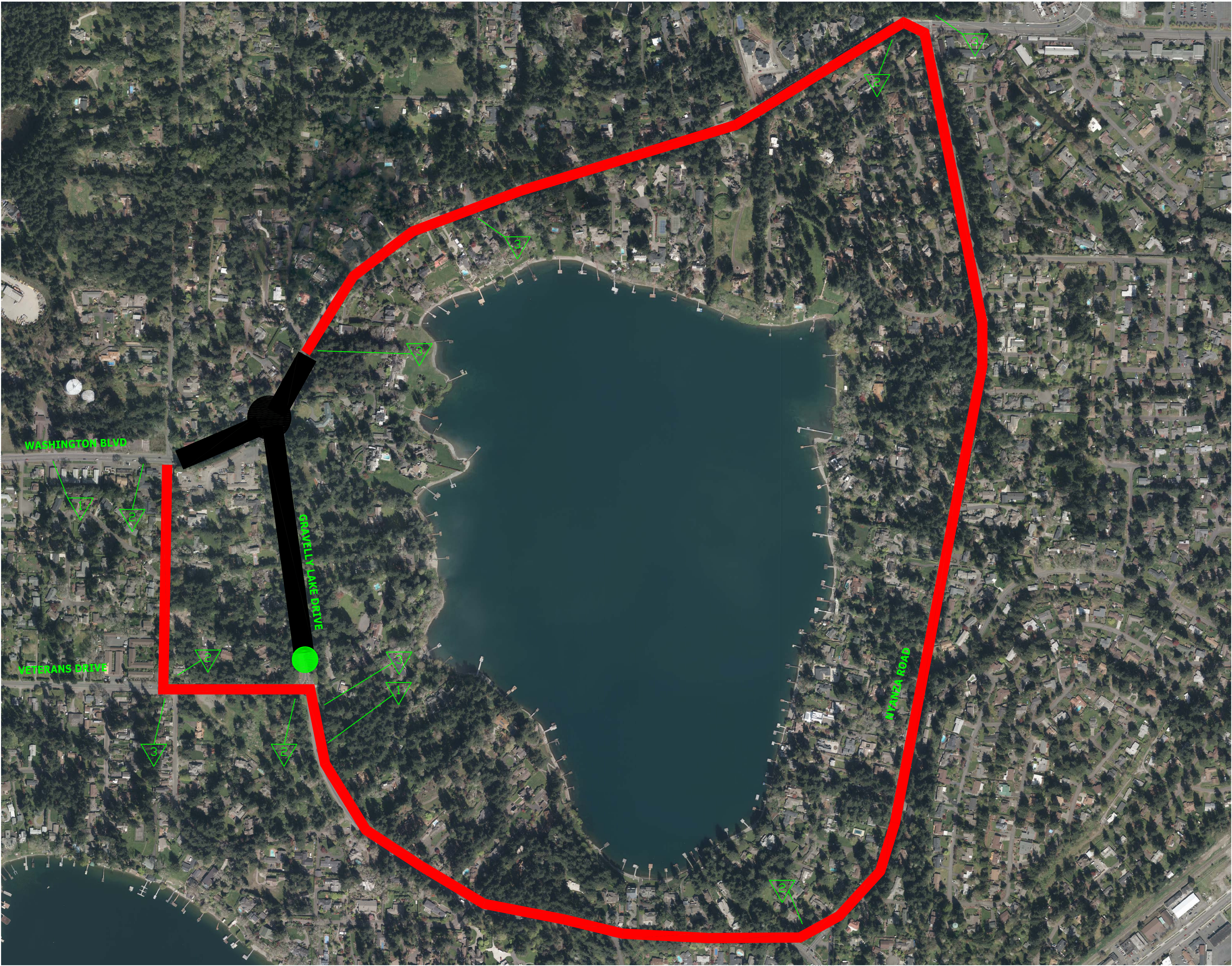
CITY SHALL MONITOR TRAFFIC CONDITIONS AT THE INTERSECTIONS OF VETERANS/INTERLAAKEN AND WASHINGTON/INTERLAAKEN IN THE EVENT ALL-WAY STOPS ARE NEEDED.

TRAFFIC CONTROL SIGN SCHEDULE



No.	Release/Revision	Re. Date	Re. By	Designed By:	Project Name:	Job No.
△				T. POKSWINSKI	JBLM-NORTH ACCESS IMPROVEMENT PROJECT	302.0077
△				Drawn By:	PHASE I	Drawing No.
△				Checked By:		TC6
△				Approved By:	Drawing Name:	Sheet of
△				Project Start Date:	TRAFFIC CONTROL PLAN - STAGE 5	150 153
△				Drawing Scale:		
△				AS SHOWN		
△				Electronic File Name:		
△				302.0077		





LEGEND

DETOUR ROUTE

ROAD CLOSURE

POINT OF LOCAL ACCESS

TRAFFIC CONTROL NOTES

REMOVE ALL DETOURS FROM PREVIOUS STAGES.

ONE WEEK PRIOR TO DETOUR GOING INTO EFFECT, SET UP PORTABLE CHANGEABLE MESSAGE SIGN AT THE GRAVELLY/WASHINGTON INTERSECTION TO NOTIFY MOTORISTS OF DETOUR. FOLLOWING THE DETOUR GOING INTO EFFECT, MOVE PCMS TO THE INTERSECTION OF GRAVELLY/NYANZA (NORTH) TO ALERT TRAVELERS WEST OF NYANZA OF CLOSURE AT GRAVELLY/WASHINGTON.

LOCAL ACCESS IS ALONG GRAVELLY JUST NORTH OF THE WASHINGTON/VETERANS ROUNDABOUT.

CITY SHALL MONITOR TRAFFIC CONDITIONS AT THE INTERSECTIONS OF VETERANS/INTERLAAKEN AND WASHINGTON/INTERLAAKEN IN THE EVENT ALL-WAY STOPS ARE NEEDED.

TRAFFIC CONTROL SIGN SCHEDULE

1

ROAD WORK AHEAD

W20-1

100'

2

DETOUR

M4-9R

100'

3

DETOUR

M4-9L

100'

DETOUR AHEAD

W20-2

ROAD CLOSED AHEAD

W20-3

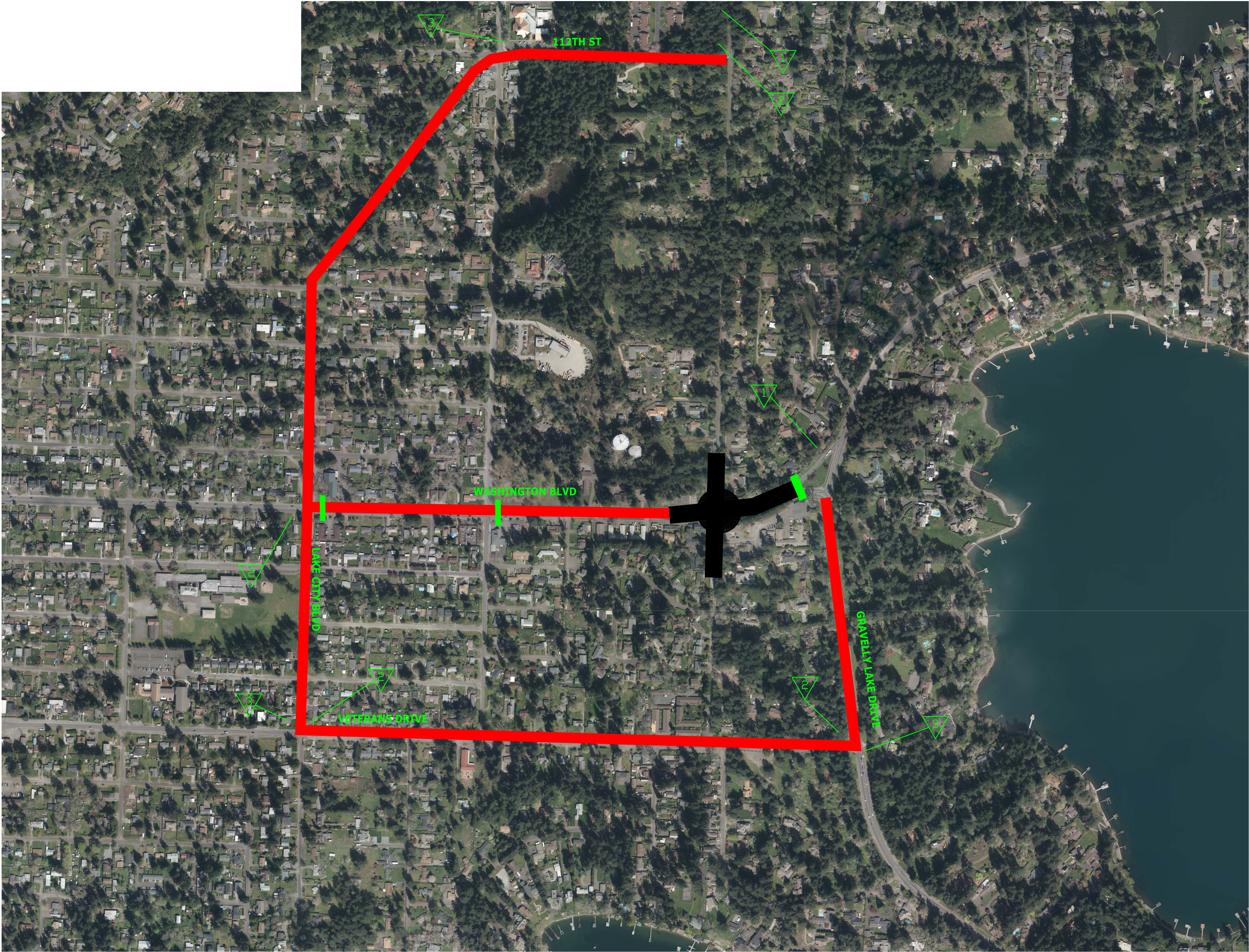
HORIZONTAL GRAPHIC SCALE

FULL SIZE GRAPHIC SCALE: 1"= 300'

HALF SIZE GRAPHIC SCALE: 1"= 600'

N

No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	<div><div>CITY OF LAKEWOOD, WA</div><div>1996</div></div> <div><div>THOMAS S. POKSWINSKI</div><div>STATE OF WASHINGTON</div><div>REGISTERED PROFESSIONAL ENGINEER</div></div>	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
<div></div>				Drawn By: T. POKSWINSKI		Drawing Name: TRAFFIC CONTROL PLAN - STAGE 6	Drawing No. TC7
<div></div>				Checked By: W. OTT			
<div></div>				Approved By: P. BUCICH			
<div></div>				Project Start Date: 3/1/20 Drawing Scale: AS SHOWN			
<div></div>				Electronic File Name: 302.0077			Sheet 151 of 153



- LEGEND
- DETOUR ROUTE
 - ROAD CLOSURE
 - TYPE III BARRICADES

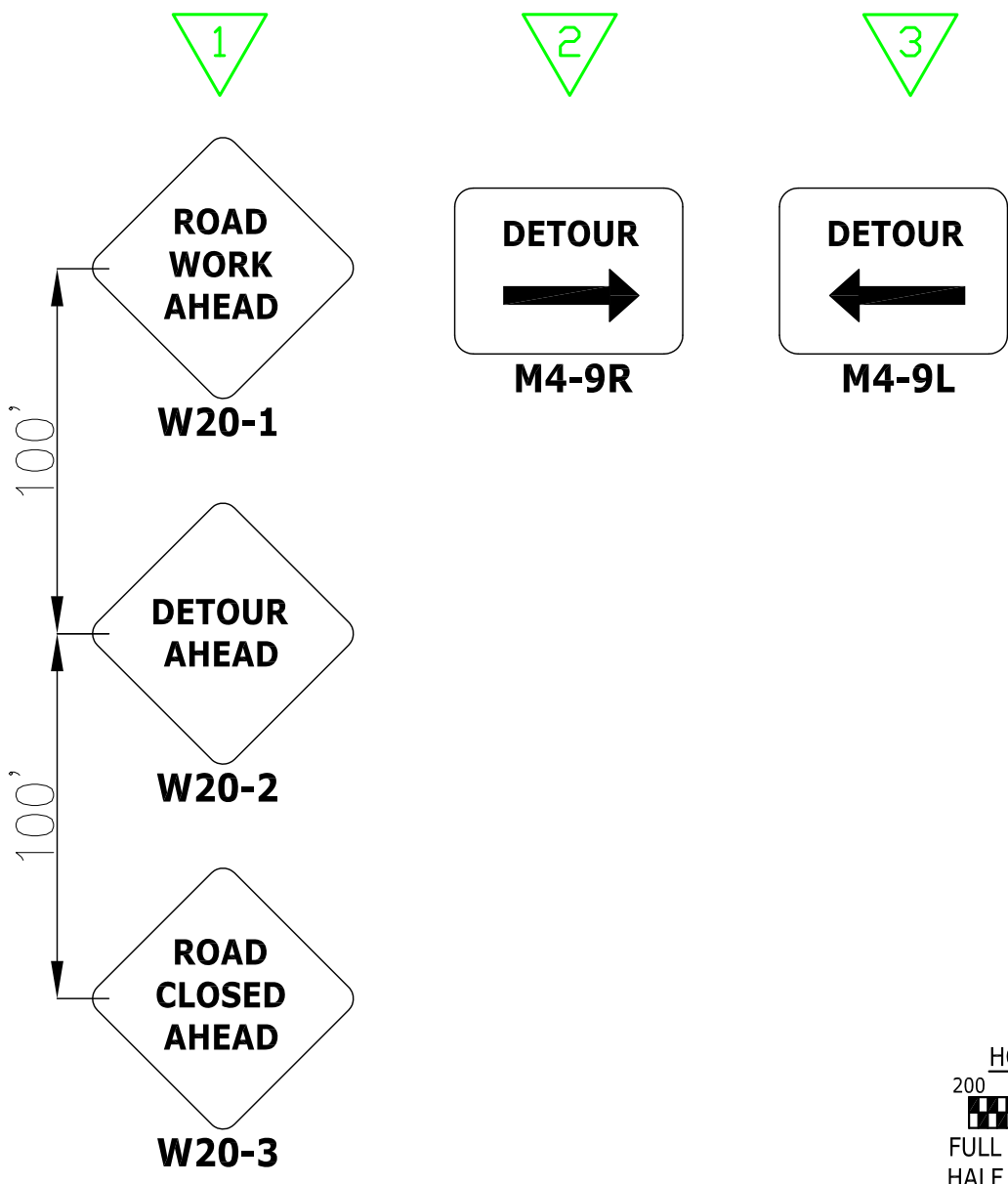
TRAFFIC CONTROL NOTES

REMOVE ALL PREVIOUS DETOURS.

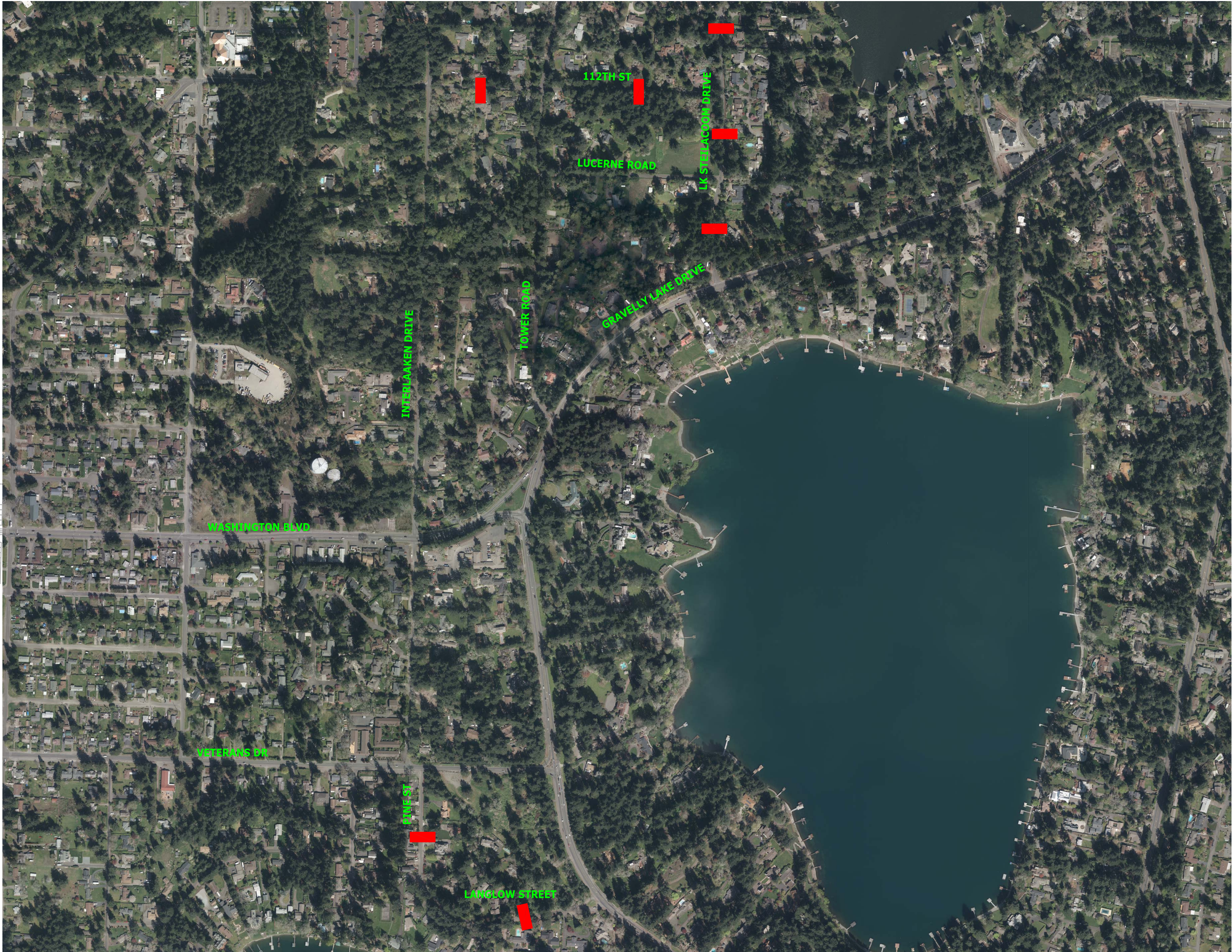
LOCAL ACCESS IS ALONG GRAVELLY JUST NORTH OF THE WASHINGTON/VETERANS ROUNDABOUT.

CITY SHALL MONITOR TRAFFIC CONDITIONS AT THE INTERSECTIONS OF VETERANS/INTERLAKEN AND WASHINGTON/INTERLAKEN IN THE EVENT ALL-WAY STOPS ARE NEEDED.

TRAFFIC CONTROL SIGN SCHEDULE



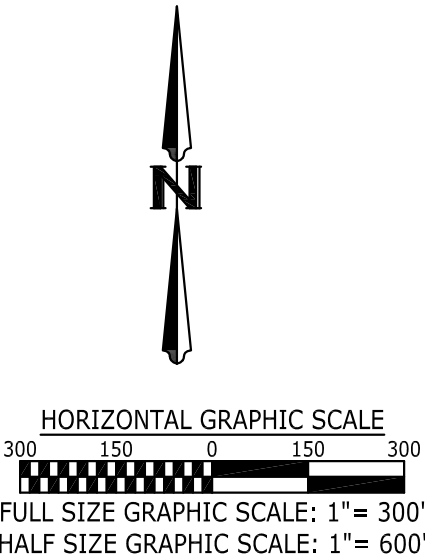
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				Drawn By: T. POKSWINSKI		Drawing Name: TRAFFIC CONTROL PLAN - STAGE 7	Drawing No. TC8
				Checked By: W. OTT			
				Approved By: P. BUCICH			
				Project Start Date: 3/1/20			
				Drawing Scale: AS SHOWN			
				Electronic File Name: 302.0077			Sheet 152 of 153



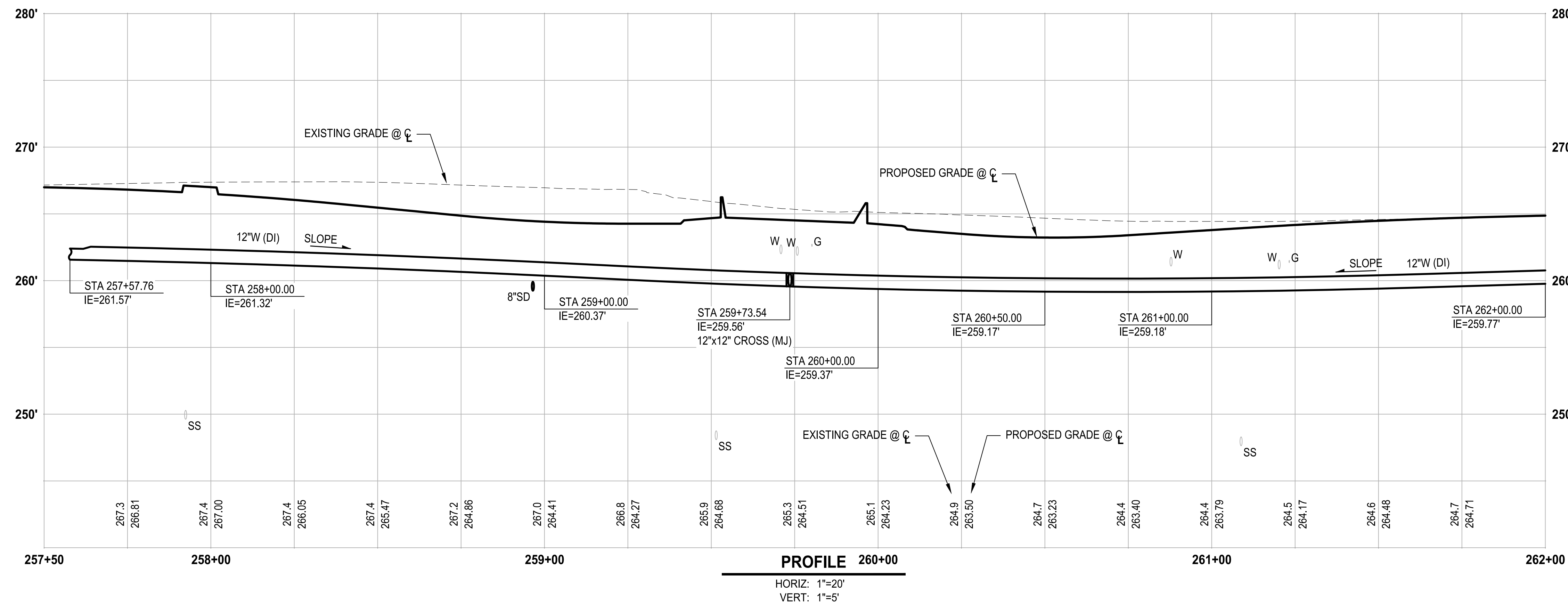
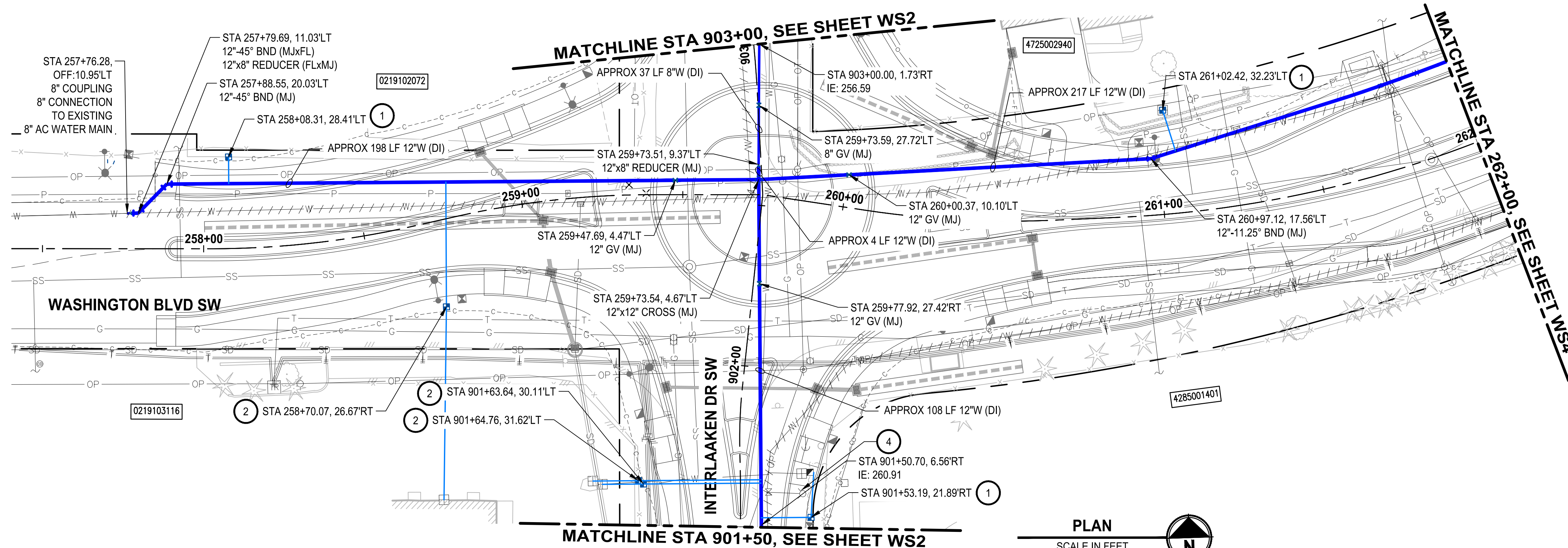
CONSTRUCTION NOTES

INSTALL SPEED HUMP PER DETAIL ON CITY OF LAKEWOOD
STANDARD PLANS RW-07, RW-08, AND RW-09. SPEED HUMP
SHALL INCLUDE SIGNING AND TRAFFIC MARKING.

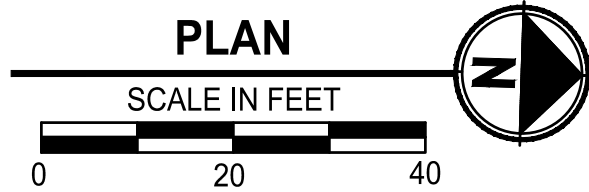
LAYOUT SHALL BE COMPLETED IN THE FIELD BY THE ENGINEER.



No.	Release/Revision	Re. Date	Re. By	Designed By: T. POKSWINSKI	<div></div>	Project Name: JBLM-NORTH ACCESS IMPROVEMENT PROJECT PHASE I	Job No. 302.0077
				Drawn By: T. POKSWINSKI		Drawing Name: TRAFFIC CONTROL PLAN - ALTERNATE ROUTE DETAILS	Drawing No. TC9
				Checked By: W. OTT			
				Approved By: P. BUCICH			
				Project Start Date: 3/1/20			
				Drawing Scale: AS SHOWN			
				Electronic File Name: 302.0077			Sheet 153 of 153




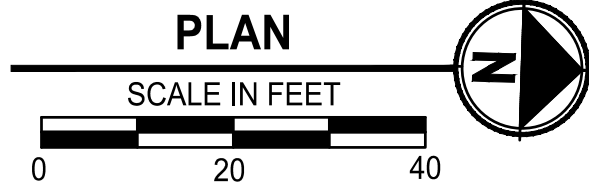
WS1



▷	REVISIONS

DESIGNED	Y. MAHMOOD
DRAWN	Y. MAHMOOD
CHECKED	R. RAYMOND
APPROVED	J. WRIGHT

 ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY	
FILE NAME	PS4104018-WS1-2
JOB No.	216-4104-017
DATE	FEBRUARY 2021

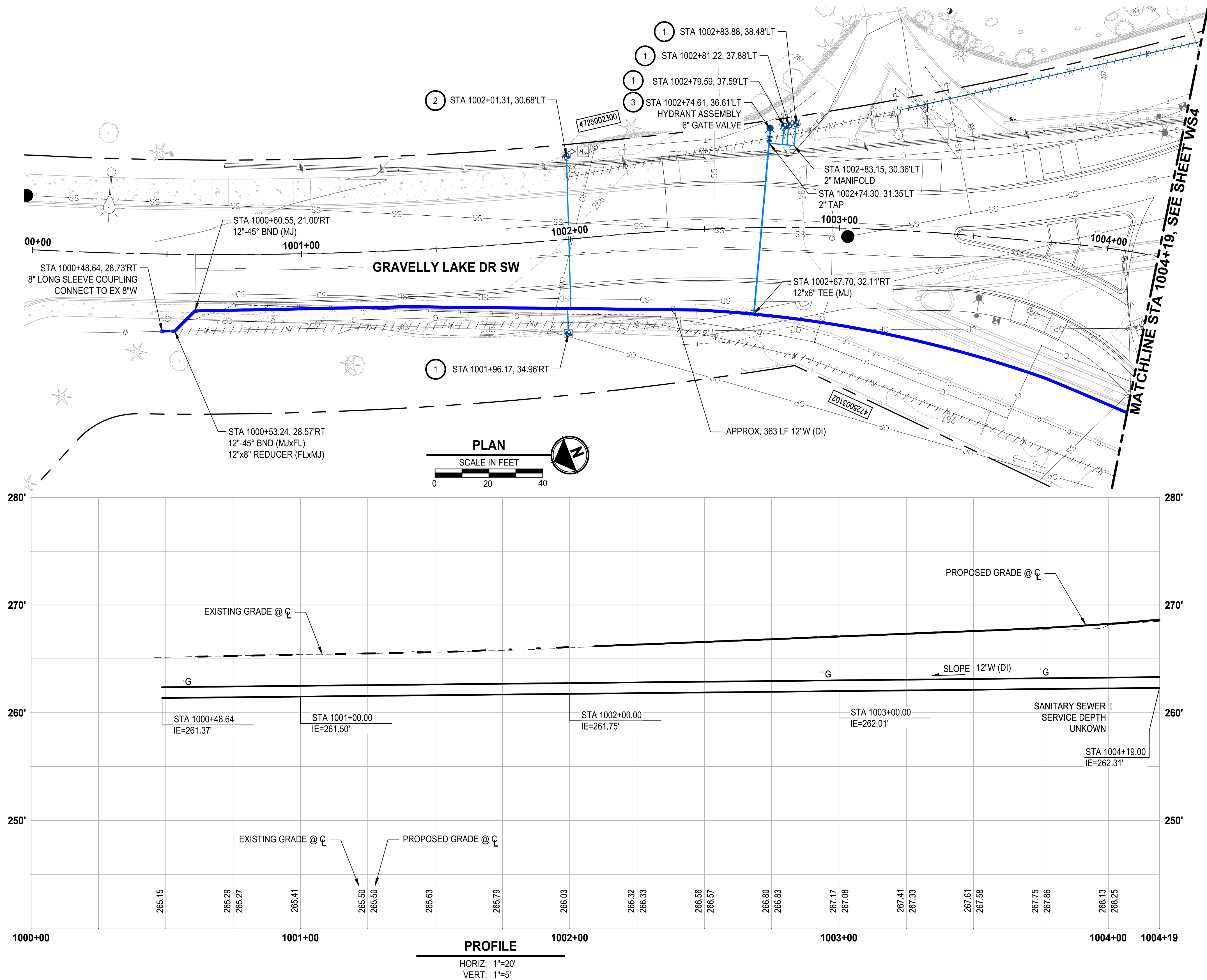


- 

WS2

WATER MAIN PLAN AND PROFILE INTERLAKKEN DR SW

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly Lake SW Water Main Replacement\99Svcs\CADD\DWG PLOTTED BY: mahmoudy DATE: Friday, February 5, 2021 2:45:17 PM LAYOUT: WS3



CONSTRUCTION NOTES:

- 1 REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
- 2 WATER SERVICES LOCATED ON THE SIDE OF THE STREET OPPOSITE FROM THE WATER MAIN SHALL BE INSTALLED PER LWD DETAIL 7A IN A 2.5" PVC SCHEDULE 40 SOLVENT WELD JOINT SLEEVE JACKED OR PUSHED UNDER THE EXISTING ROADWAY PAVEMENT.
- 3 INSTALL NEW FIRE HYDRANT ASSEMBLY PER LWD DETAIL 9.
- 4 REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
- 5 INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
- 6 REFER TO RH2 PLANS FOR CONTINUATION

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING THE LOCATION, DEPTH, SIZE, MATERIAL, AND CONFIGURATION OF THE EXISTING WATER MAIN SYSTEM. VERIFICATION SHALL BE COMPLETED EARLY ENOUGH SO AS TO ADJUST PROPOSED WATER MAIN SYSTEM TO ACCOMMODATE ACTUAL CONDITIONS. UNDER NO CIRCUMSTANCES WILL LAKEWOOD WATER DISTRICT PAY THE CONTRACTOR ADDITIONAL MONIES TO RELAY WATER MAIN AND/OR FITTINGS INSTALLED UNDER THIS CONTRACT.
2. WHEN THE HORIZONTAL SEPARATION BETWEEN WATER AND SEWER IS LESS THAN 10-FEET, THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF THE WATER MAIN AND THE CROWN OF THE SEWER SHALL BE 18-INCHES MINIMUM
3. ALL WATER MAIN JOINTS AND FITTINGS SHALL BE RESTRAINED.
4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. HYDROSEED ALL GRASS AREAS DISTURBED.
5. THE CONTRACTOR MAY INSTALL THE WATERMAIN AT THE STANDARD DEPTH SHOWN ON THE LAKEWOOD WATER DISTRICT'S STANDARD TRENCH DETAIL. ANY UTILITY CONFLICTS CREATED BY USING THE STANDARD LAKEWOOD WATER DISTRICT DEPTH SHALL BE MITIGATED THROUGH ADDITIONAL EXCAVATION AND FITTINGS AT THE SOLE COST OF THE CONTRACTOR.

LEGEND:

- ////// CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



Know what's below.
Call before you dig.

REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOUDI
			DRAWN
			Y. MAHMOUDI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

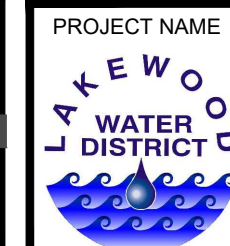
ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS4104017-WS3-6
JOB No. 216-4104-017
DATE FEBRUARY 2021



FEBRUARY 05, 2021

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PROJECT NAME
LAKEWOOD WATER DISTRICT

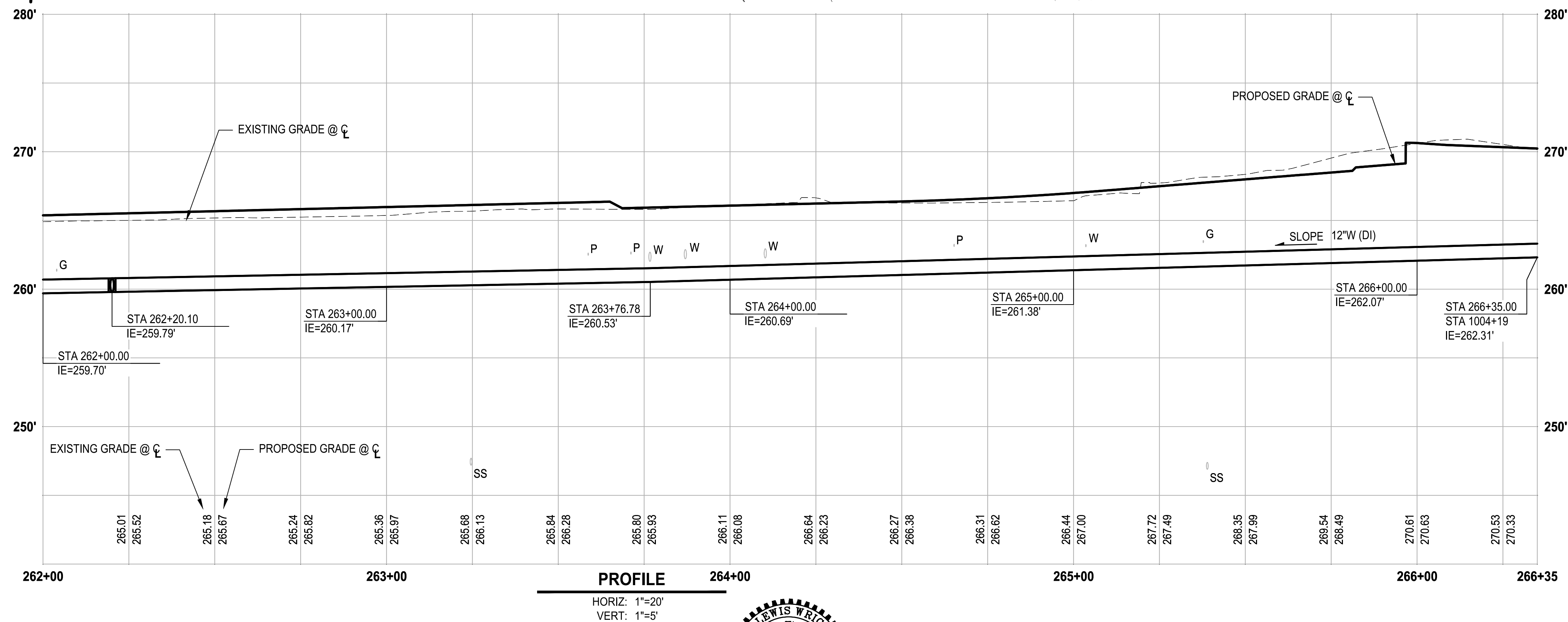
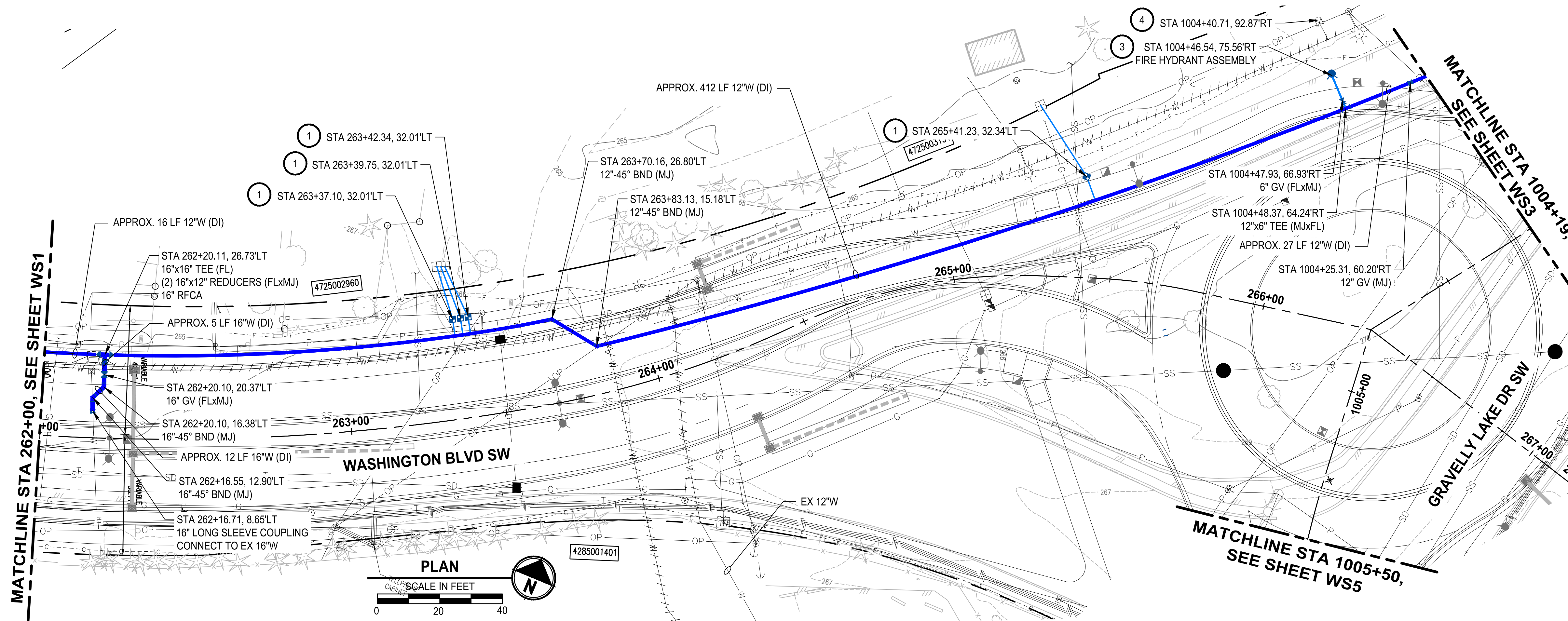
**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

**WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW**

DRAWING NO.
3 OF 21

WS3

U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 GravellyLake Water Main Replacement\99Svcs\CADD\DWG LAYOUT: WS4 PLOTTED BY: mahmoudy DATE: Friday, February 5, 2021 2:47:33 PM



CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
2. WATER SERVICES LOCATED ON THE SIDE OF THE STREET OPPOSITE FROM THE WATER MAIN SHALL BE INSTALLED PER LWD DETAIL 7A IN A 2.5" PVC SCHEDULE 40 SOLVENT WELD JOINT SLEEVE JACKED OR PUSHED UNDER THE EXISTING ROADWAY PAVEMENT.
3. INSTALL NEW FIRE HYDRANT ASSEMBLY PER LWD DETAIL 9.
4. REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
5. INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
6. REFER TO RH2 PLANS FOR CONTINUATION

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING THE LOCATION, DEPTH, SIZE, MATERIAL, AND CONFIGURATION OF THE EXISTING WATER MAIN SYSTEM. VERIFICATION SHALL BE COMPLETED EARLY ENOUGH SO AS TO ADJUST PROPOSED WATER MAIN SYSTEM TO ACCOMMODATE ACTUAL CONDITIONS. UNDER NO CIRCUMSTANCES WILL LAKEWOOD WATER DISTRICT PAY THE CONTRACTOR ADDITIONAL MONIES TO RELAY WATER MAIN AND/OR FITTINGS INSTALLED UNDER THIS CONTRACT.
2. WHEN THE HORIZONTAL SEPARATION BETWEEN WATER AND SEWER IS LESS THAN 10-FEET, THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF THE WATER MAIN AND THE CROWN OF THE SEWER SHALL BE 18-INCHES MINIMUM
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4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. HYDROSEED ALL GRASS AREAS DISTURBED.
5. THE CONTRACTOR MAY INSTALL THE WATERMAIN AT THE STANDARD DEPTH SHOWN ON THE LAKEWOOD WATER DISTRICT'S STANDARD TRENCH DETAIL. ANY UTILITY CONFLICTS CREATED BY USING THE STANDARD LAKEWOOD WATER DISTRICT DEPTH SHALL BE MITIGATED THROUGH ADDITIONAL EXCAVATION AND FITTINGS AT THE SOLE COST OF THE CONTRACTOR.

LEGEND:

- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



Know what's below.
Call before you dig.

REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

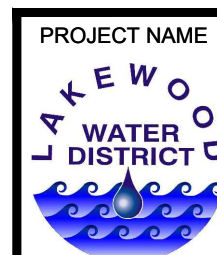
ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME
PS4104017-WS3-6
JOB No.
216-4104-017
DATE
FEBRUARY 2021



FEBRUARY 05, 2021

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PROJECT NAME
LAKWOOD WATER DISTRICT

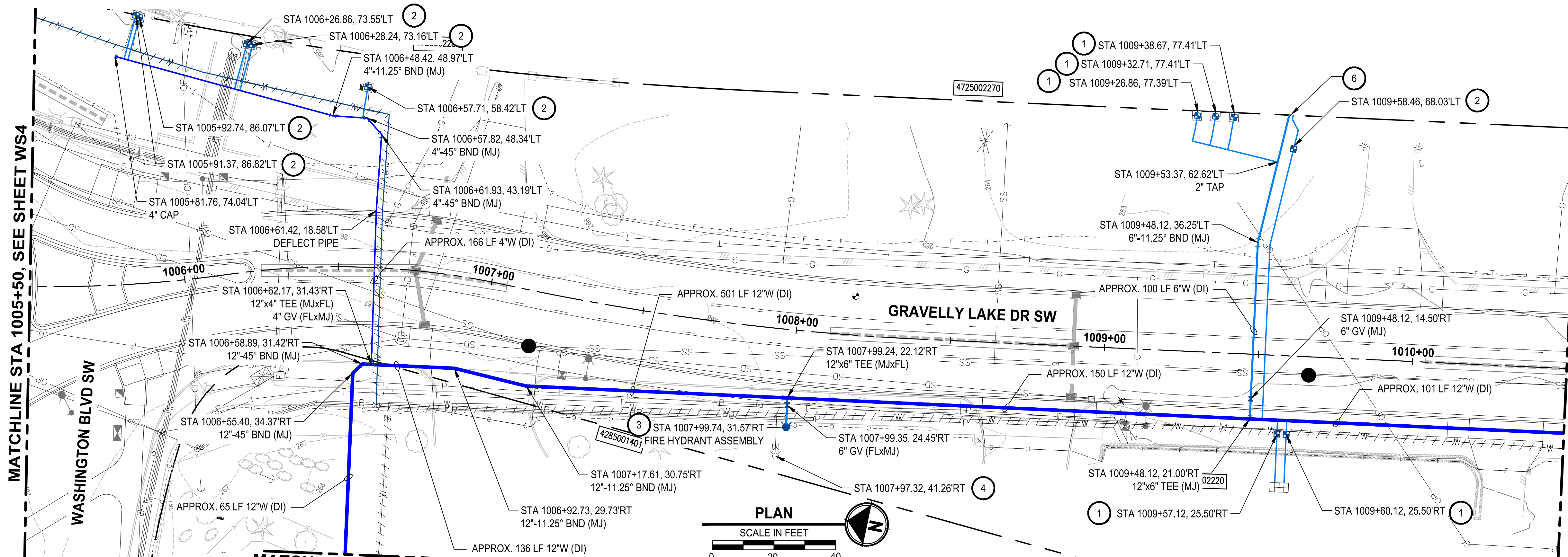
**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

**WATER MAIN PLAN AND PROFILE
WASHINGTON BLVD SW**

DRAWING NO.
4 OF 21

WS4

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 GravellyLake SW\Map\99Svcs\CADD\DWG PLOTTED BY: mahmoody DATE: Friday, February 5, 2021 2:50:53 PM LAYOUT: WS5



CONSTRUCTION NOTES:

- 1 REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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- 4 REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
- 5 INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
- 6 REFER TO RH2 PLANS FOR CONTINUATION

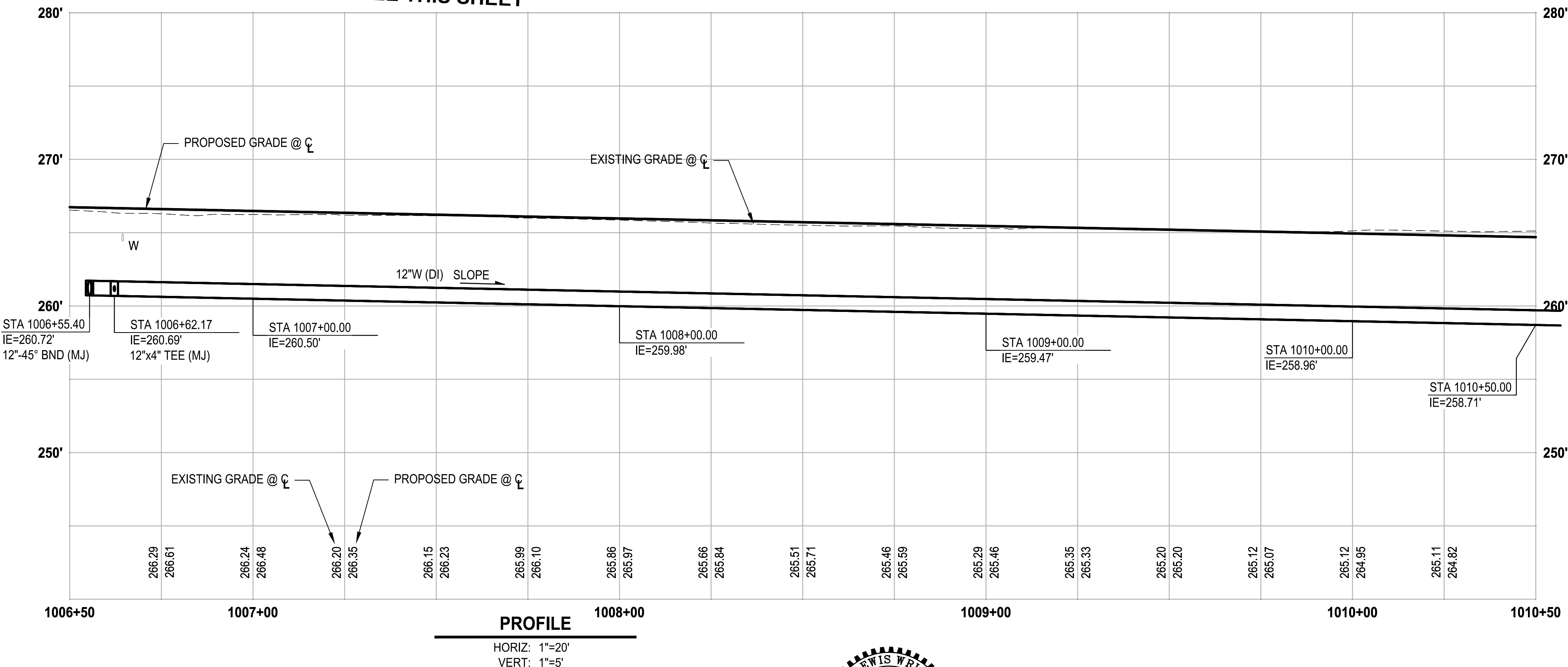
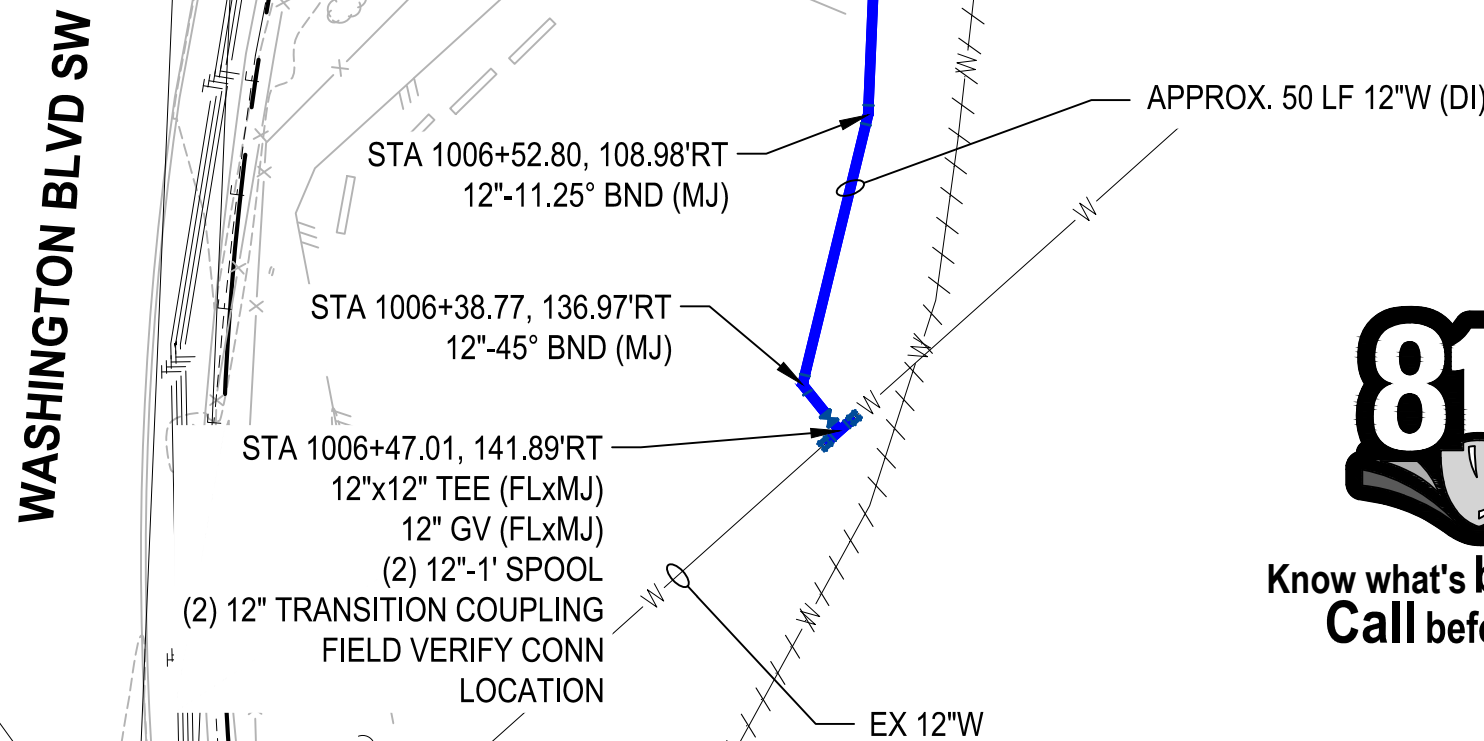
NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING THE LOCATION, DEPTH, SIZE, MATERIAL, AND CONFIGURATION OF THE EXISTING WATER MAIN SYSTEM. VERIFICATION SHALL BE COMPLETED EARLY ENOUGH SO AS TO ADJUST PROPOSED WATER MAIN SYSTEM TO ACCOMMODATE ACTUAL CONDITIONS. UNDER NO CIRCUMSTANCES WILL LAKEWOOD WATER DISTRICT PAY THE CONTRACTOR ADDITIONAL MONIES TO RELAY WATER MAIN AND/OR FITTINGS INSTALLED UNDER THIS CONTRACT.
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LEGEND:

- ////// CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION

MATCHLINE DETAIL ABOVE, SEE THIS SHEET

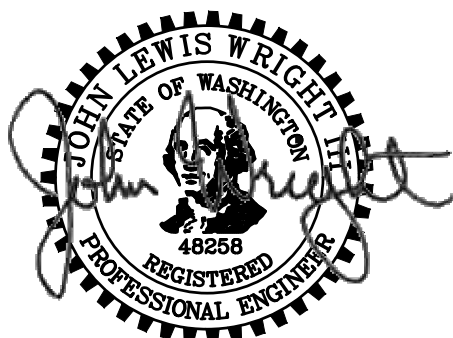


PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

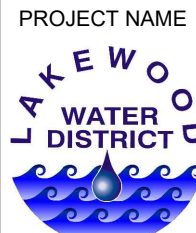
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FILE NAME	PS4104017-WS3-6
JOB No.	216-4104-017
DATE	FEBRUARY 2021



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PROJECT NAME
LAKEWOOD WATER DISTRICT

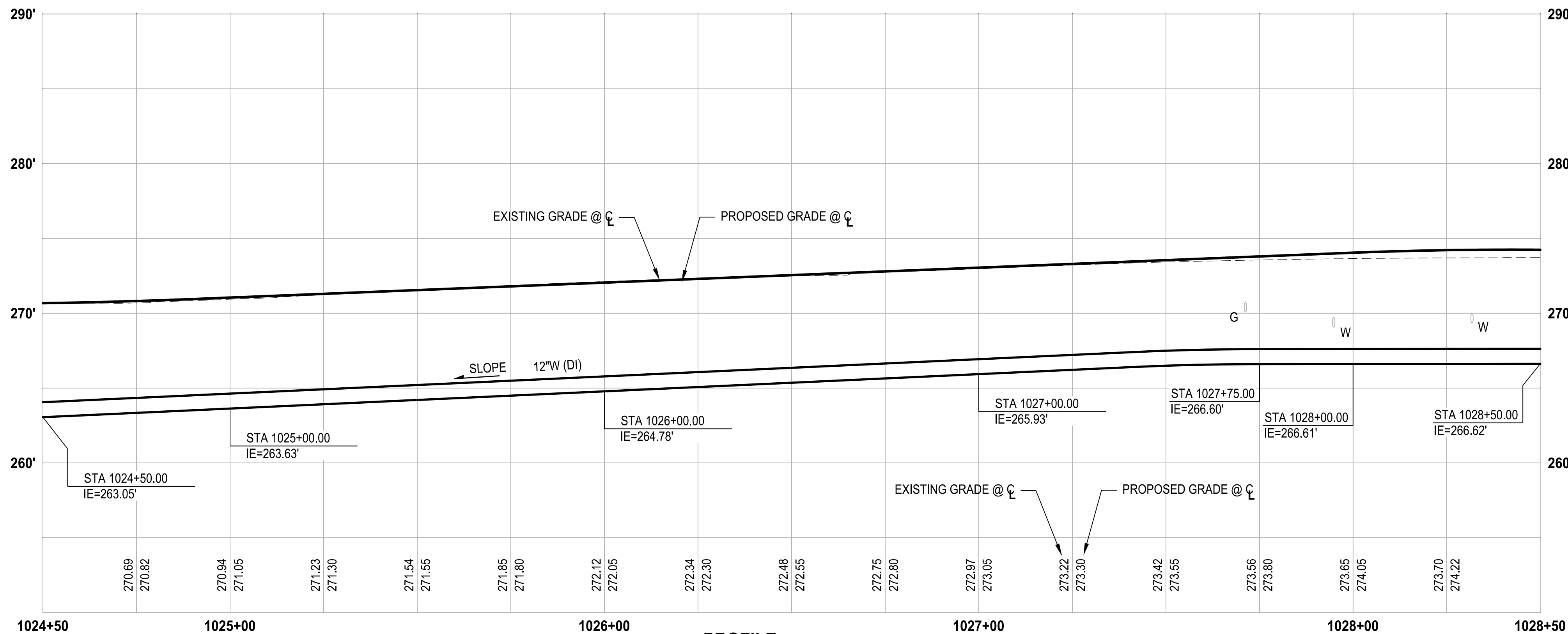
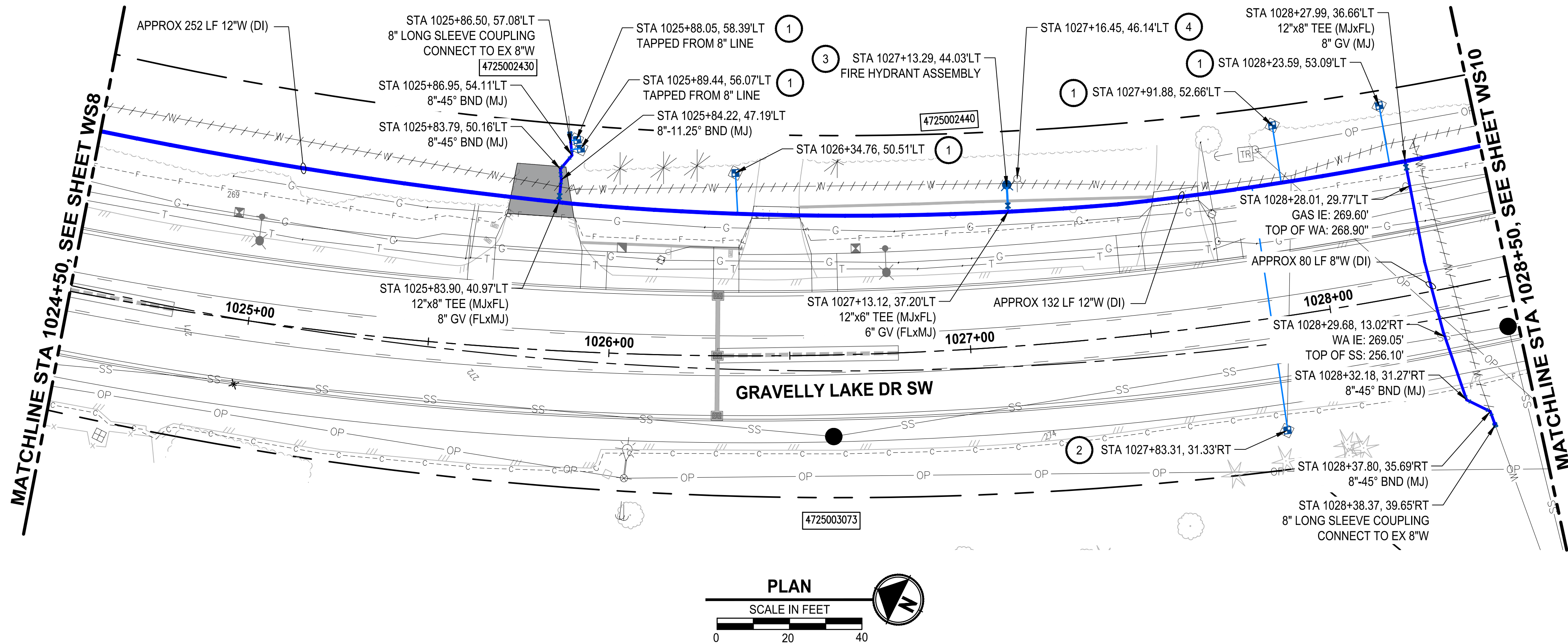
**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

**WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW**

DRAWING NO.
5 OF 21

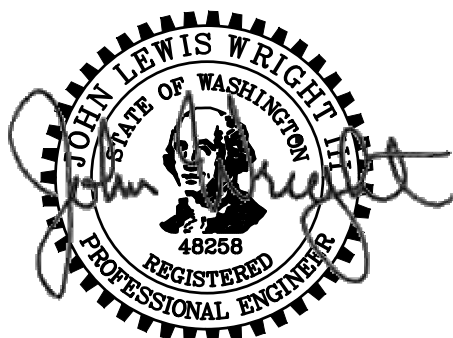
WS5

PATH: U:\PSD\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly Lake SW\95Svcs\CADD\DWG PLOTTED BY: mahmoyou DATE: Friday, February 5, 2021 3:00:43 PM LAYOUT: W9



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'



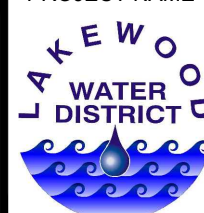
FEBRUARY 05, 2021

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P 253.604.6600
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PROJECT NAME



LAKEWOOD WATER DISTRICT

**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

CONSTRUCTION NOTES:

- 1 REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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- 4 REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
- 5 INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
- 6 REFER TO RH2 PLANS FOR CONTINUATION

NOTES:

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LEGEND:

- / / / / / CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



Know what's below.
Call before you dig.

REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

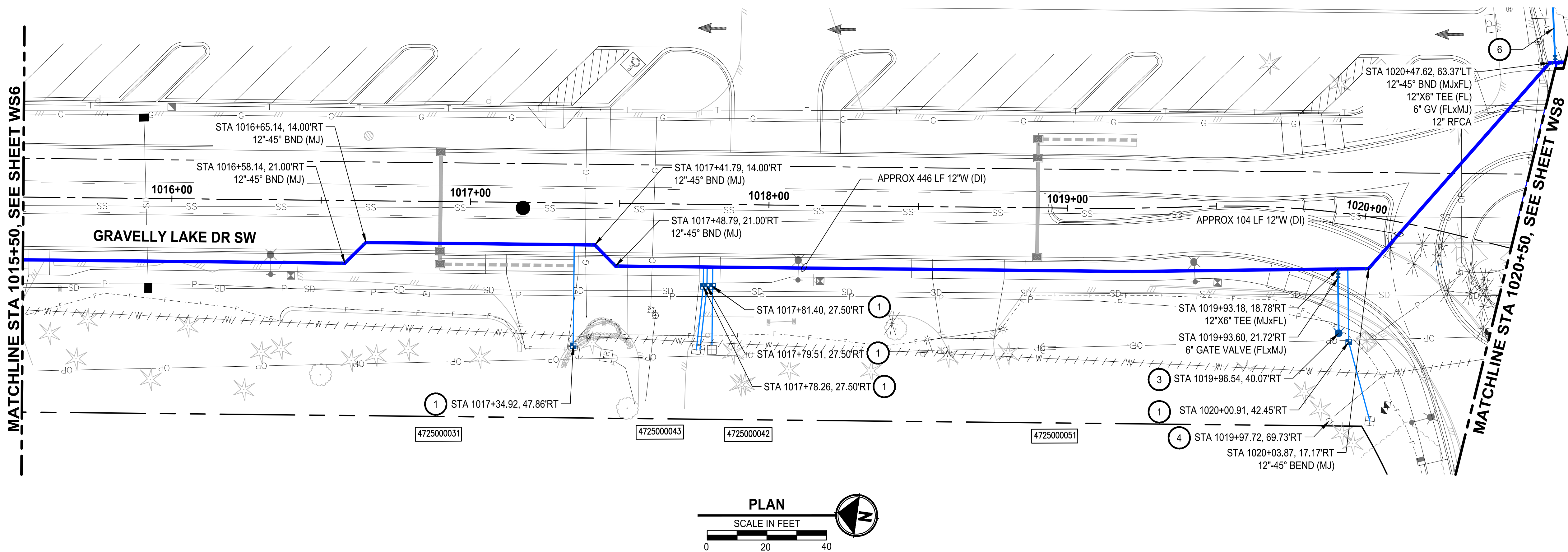
FILE NAME
PS4104017-WS7-11
JOB No.
216-4104-017
DATE
FEBRUARY 2021

**WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE BLVD SW**

DRAWING NO.
9 OF 21

WS9

PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 GravellyLakeDr WRPep\99Svcs\CADD\DWG PLOTTED BY: mahmoudy DATE: Friday, February 5, 2021 2:58:20 PM LAYOUT: WS7



CONSTRUCTION NOTES:

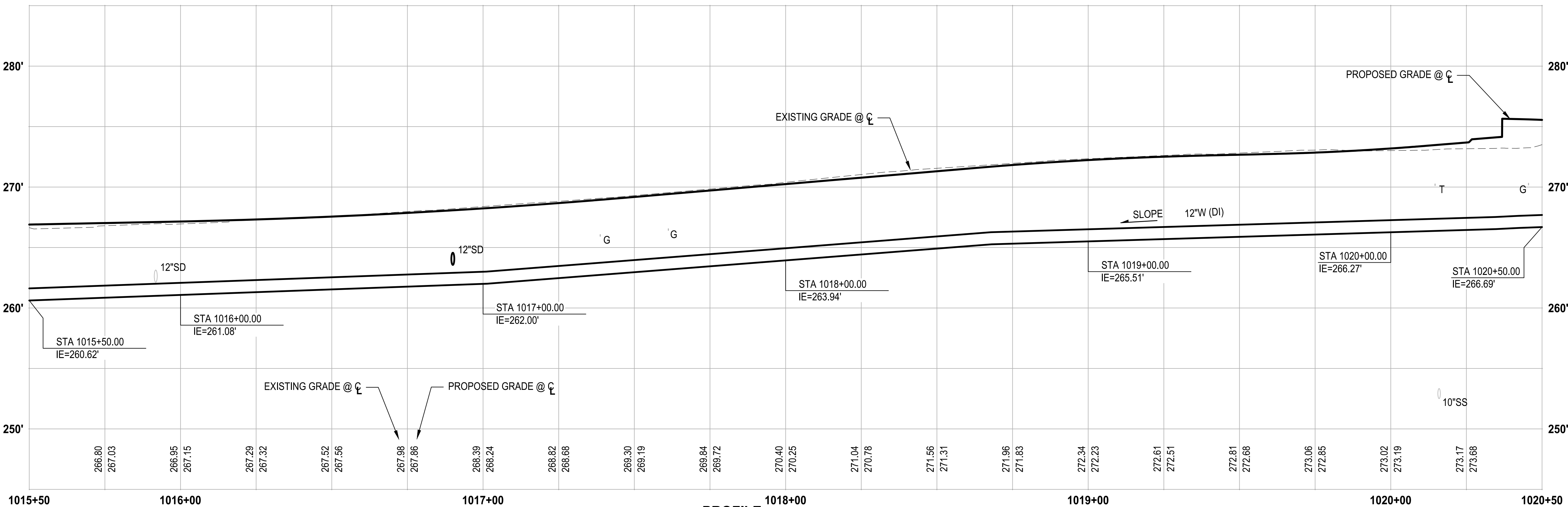
1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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5. INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
6. REFER TO RH2 PLANS FOR CONTINUATION

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LEGEND:

- ////// CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



Know what's below.
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REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

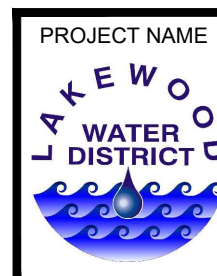
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JOB NO. 216-4104-017
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PROJECT NAME
LAKEWOOD WATER DISTRICT

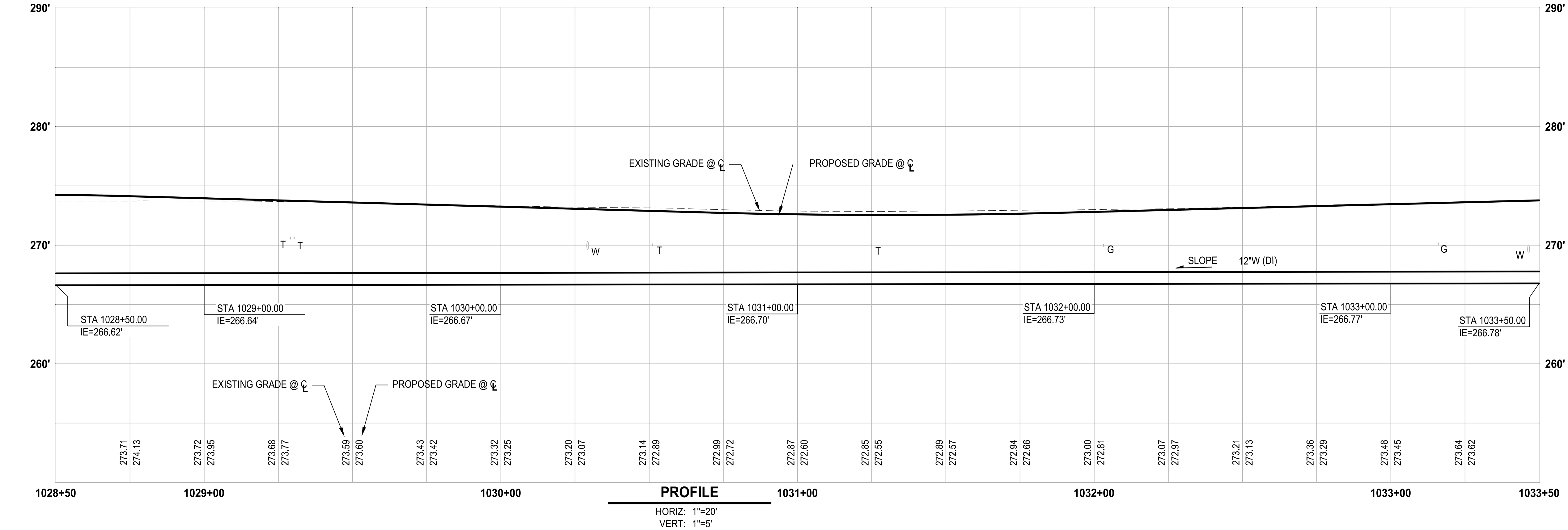
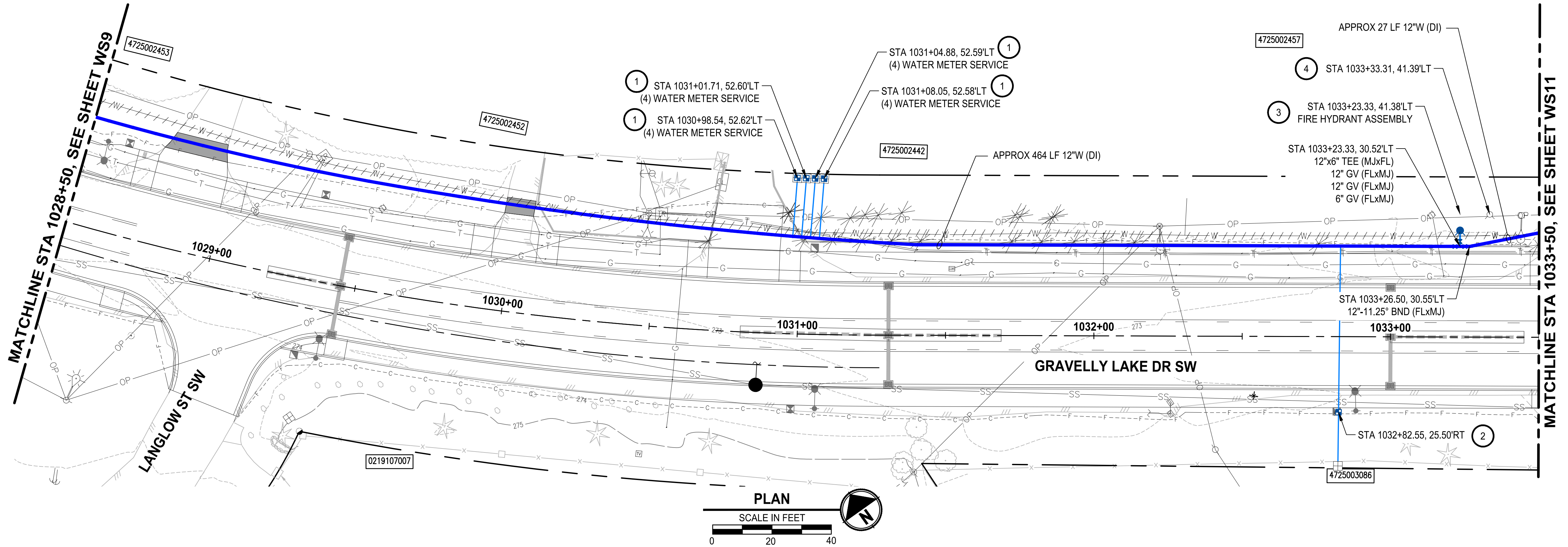
**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

**WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW**

DRAWING NO.
7 OF 21

WS7

LAYOUT: WS10 PATH: U:\PSO\Projects\Clients\104-Lakewood Water Dist\216-1104-017 Gravelly Lake Dr SW\Reel\995\cadd\DWG PLOTTED BY: mahmoud.you DATE: Friday, February 5, 2021 3:01:46 PM



REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

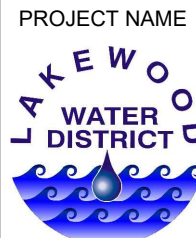
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JOB No. 216-1104-017
DATE FEBRUARY 2021



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PROJECT NAME
LAKEWOOD WATER DISTRICT

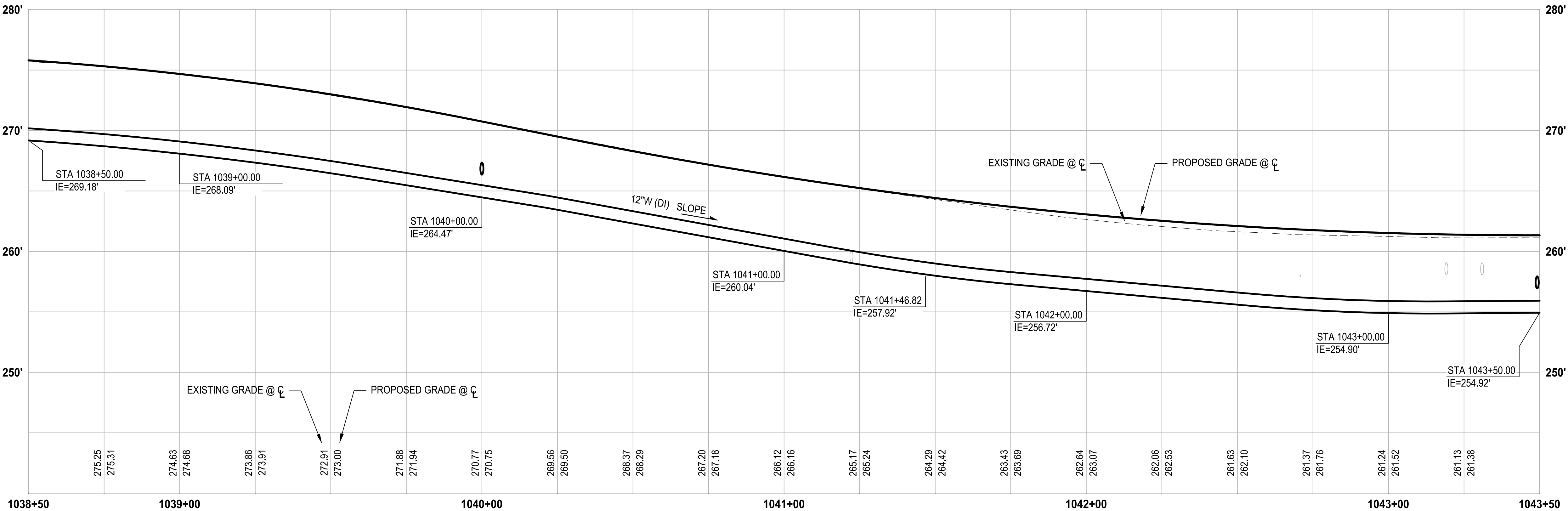
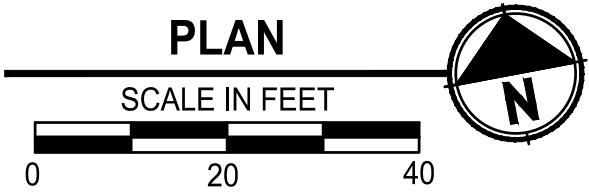
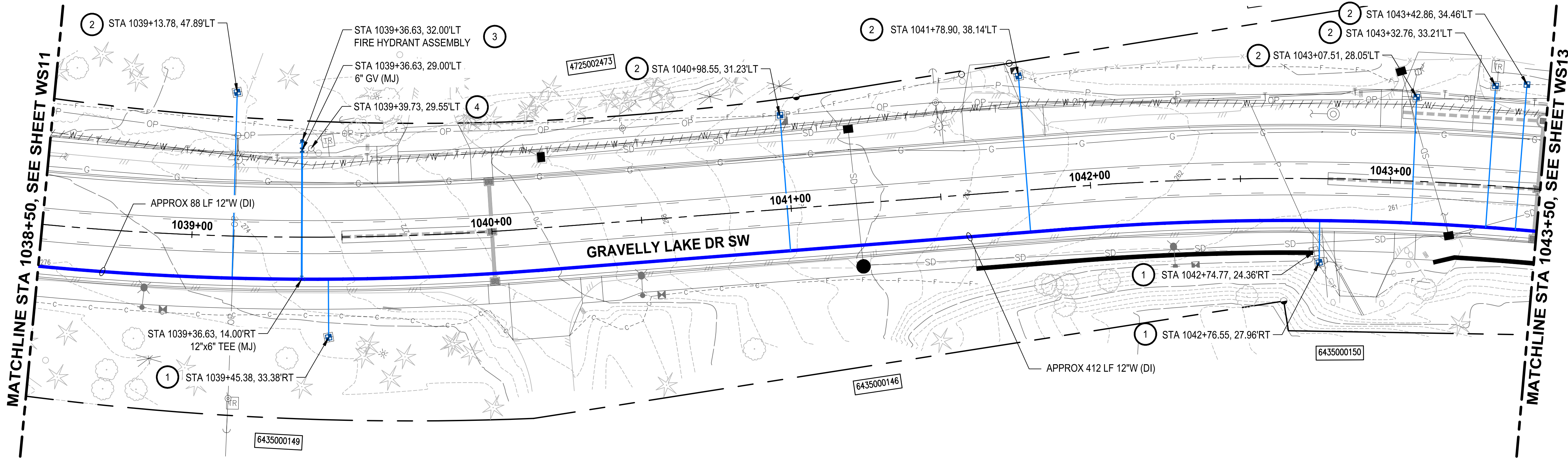
**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

**WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW**

DRAWING NO.
10 OF 21

WS10

PATH: U:\PSC\Projects\Clients\M104-Lakewood Water Dist\216-1104-017 Gravelly Lake SW\WRepl\995\cadd\DWG PLOTTED BY: mohamoyou DATE: Friday, February 5, 2021 3:22:44 PM LAYOUT: WS12



PROFILE

HORIZ: 1"=20'
VERT: 1"=5'

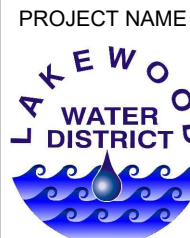


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PROJECT NAME **LAKEWOOD WATER DISTRICT**

**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

CONSTRUCTION NOTES:

- 1 REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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- 3 INSTALL NEW FIRE HYDRANT ASSEMBLY PER LWD DETAIL 9.
- 4 REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
- 5 INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
- 6 REFER TO RH2 PLANS FOR CONTINUATION

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LEGEND:

- ////// CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



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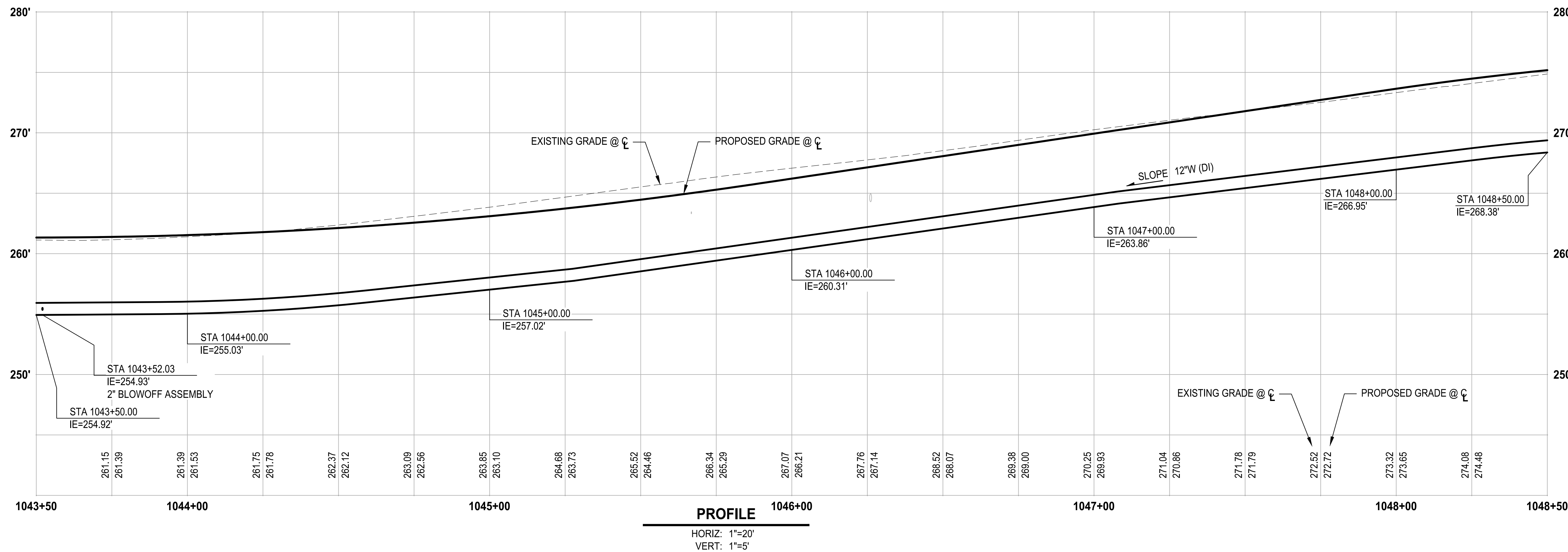
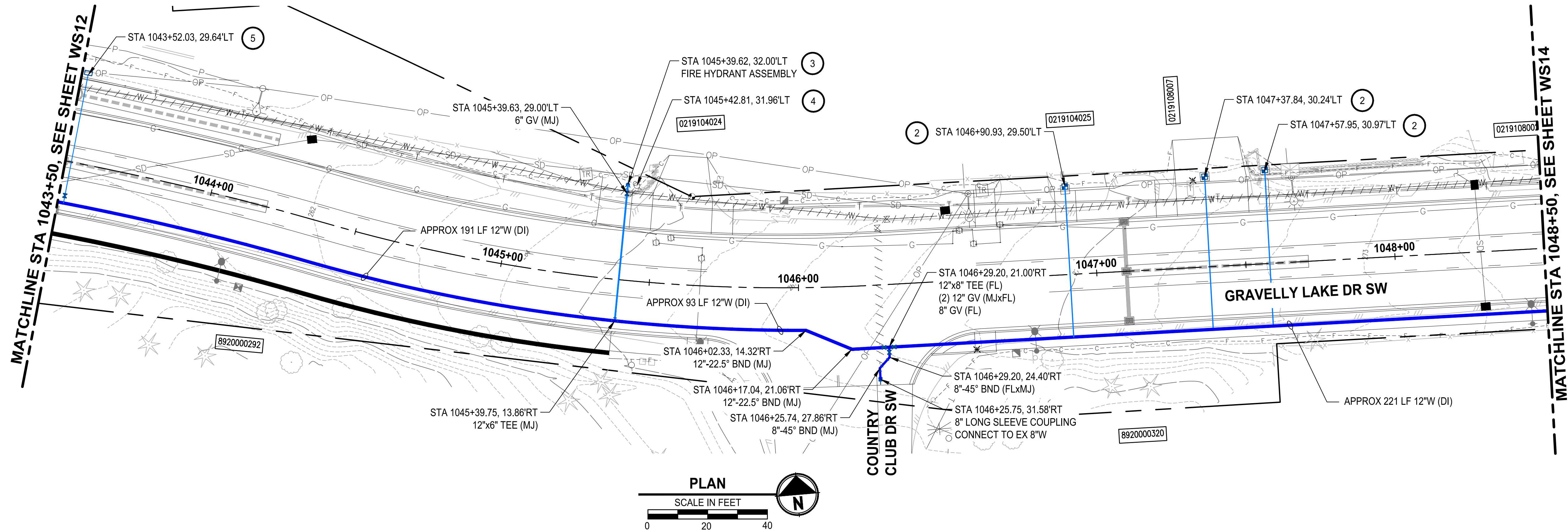
REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

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JOB No.
216-1104-017
DATE
FEBRUARY 2021

WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW

DRAWING NO.
12 OF 21

W12



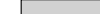

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LEGEND:

- | | |
|---|-------------------------------------|
| /// / / / / - | CAP AND ABANDON EXISTING WATER MAIN |
|  | ASPHALT PAVEMENT RESTORATION |
|  | CONCRETE PAVEMENT RESTORATION |



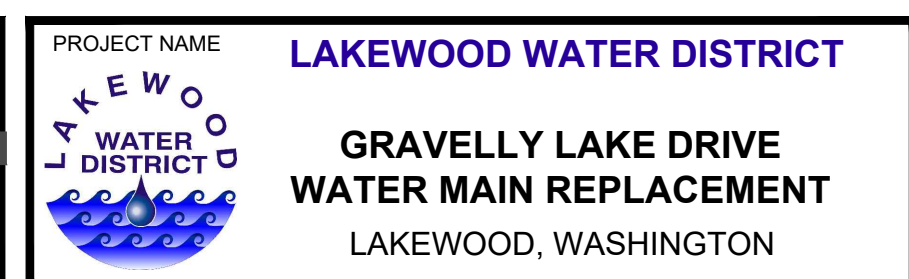
Know what's **below**.
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	REVISIONS	DATE	BY	DESIGNED Y. MAHMOODI
				DRAWN Y. MAHMOODI
				CHECKED R. RAYMOND
				APPROVED G. WRIGHT

 ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY	
FILE NAME	PS4104017-WS12-19
JOB No.	216-4104-017
DATE	FEBRUARY 2021



FEBRUARY 05, 2021



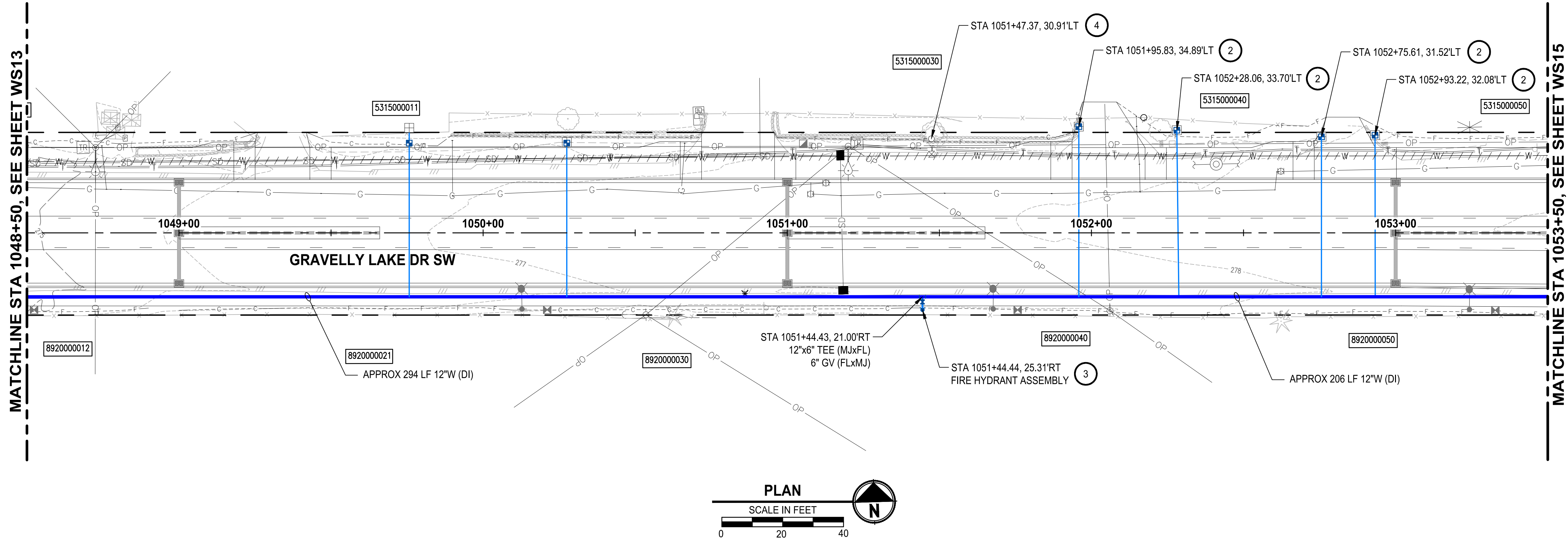
WATER MAIN PLAN AND PROFILE

GRAVELLY LAKE DR SW

DRAWING NO.
13 OF 21

WS13

LAYOUT: WS14 PATH: U:\PSO\Projects\Clients\104-Lakewood Water Dist\216-1104-017 Gravelly Lake SW\WRepl\995\cs\CAAD\DWG PLOTTED BY: mahmoudy DATE: Friday, February 5, 2021 3:23:53 PM



CONSTRUCTION NOTES:

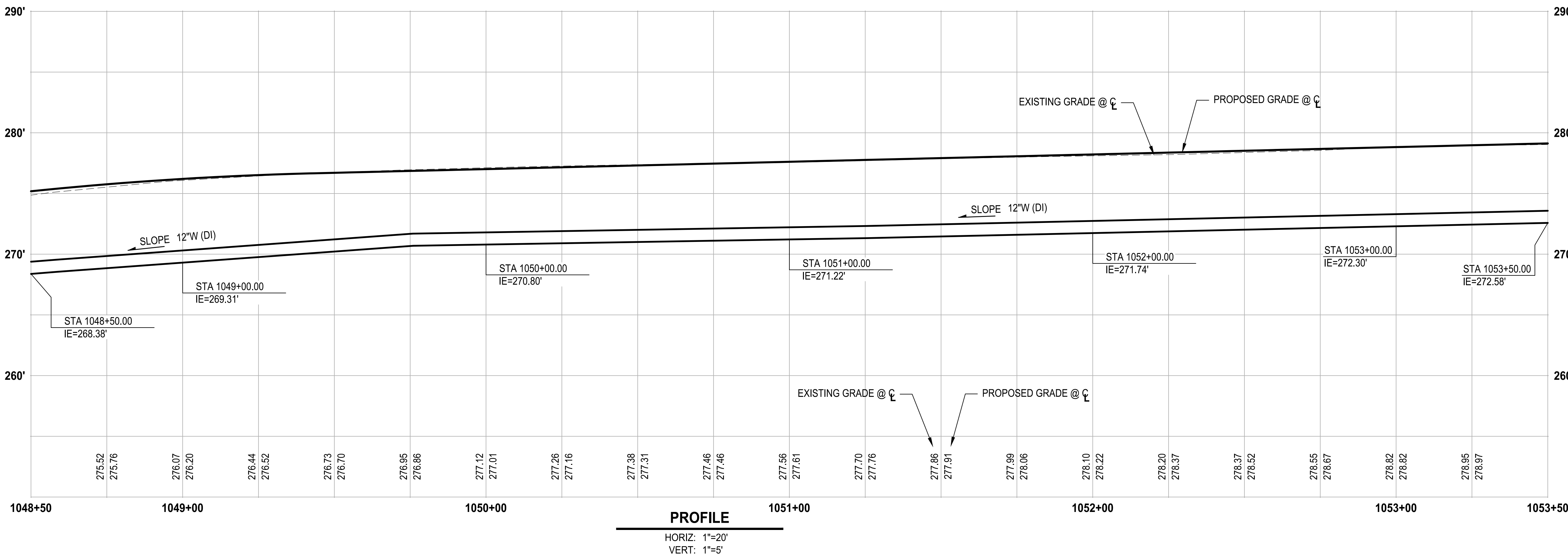
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LEGEND:

- ////// CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



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REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

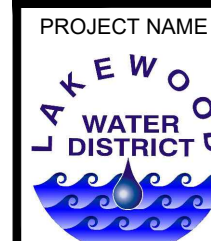
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FILE NAME
PS4104017-WS12-19
JOB No.
216-1104-017
DATE
FEBRUARY 2021



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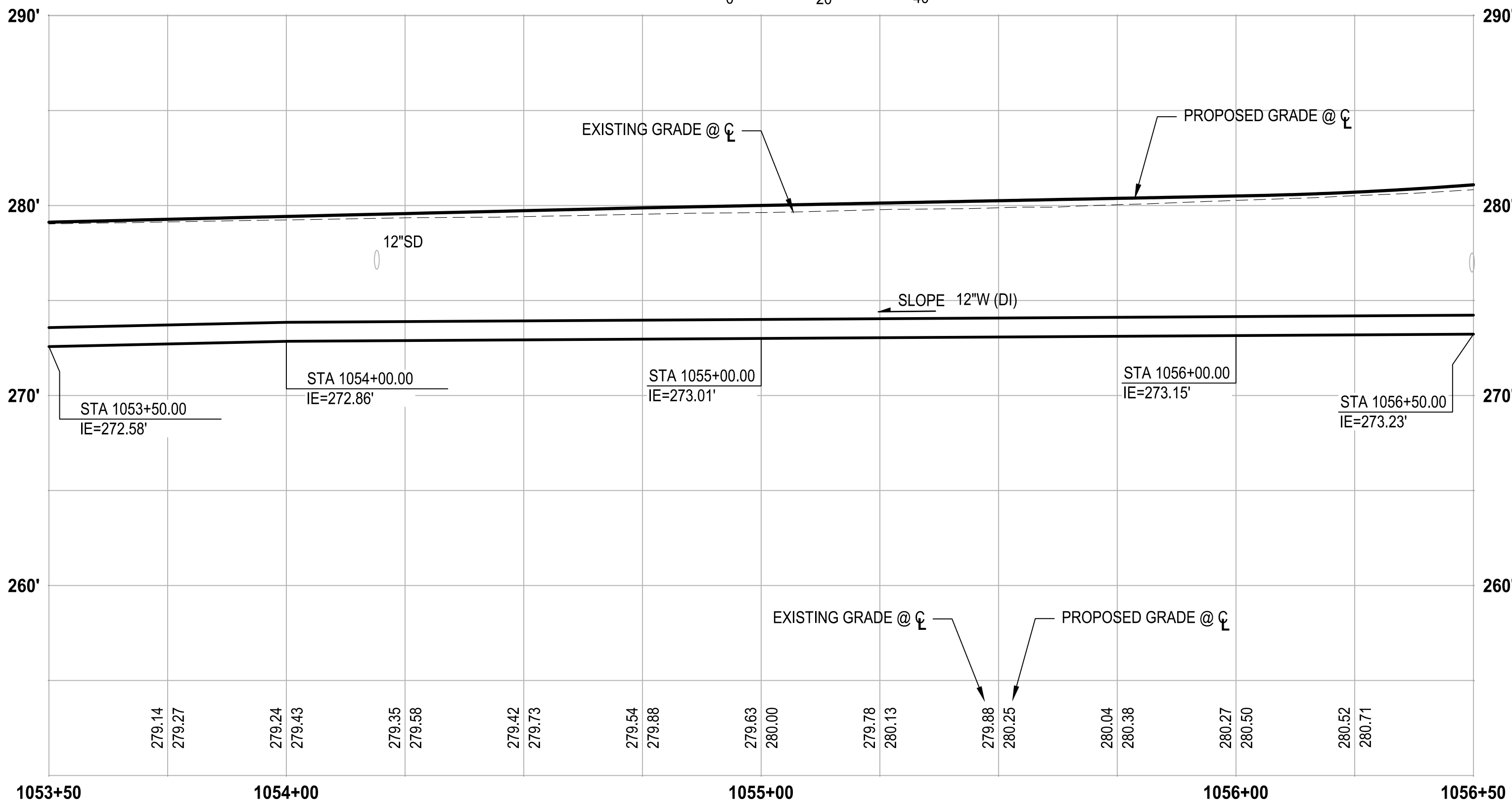
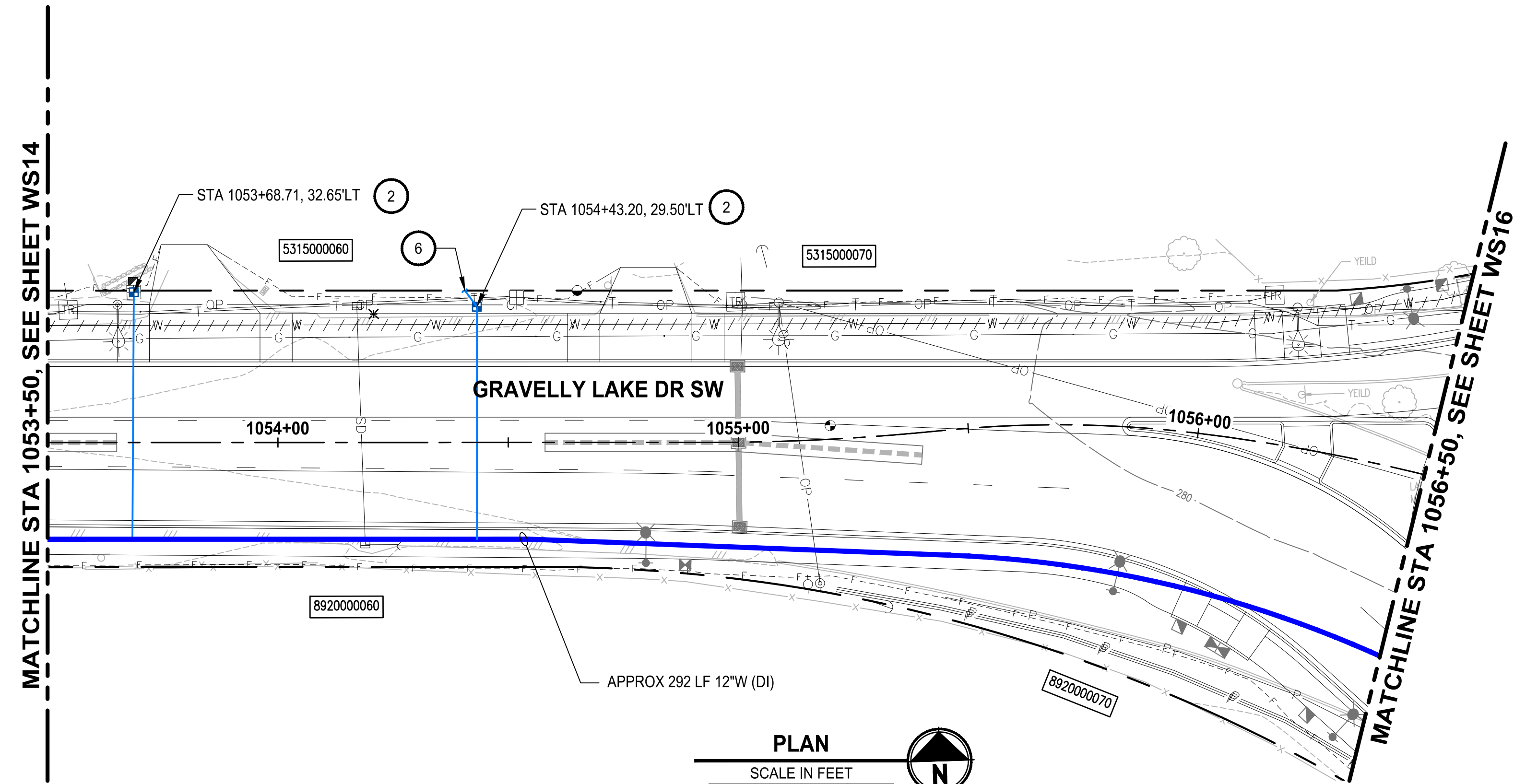
LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW

DRAWING NO.
14 OF 21

WS14

LAYOUT: WS15 PATH: U:\PSO\Projects\Clients\4104-Lakewood Water Dist\216-4104-017 Gravelly Lake SW\WMRepl\995\cvt\CADD\DWG PLOTTED BY: mahmoud.you DATE: Friday, February 5, 2021 3:24:26 PM



PROFILE

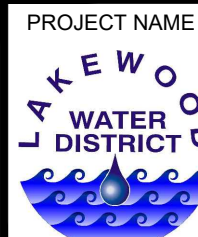
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VERT: 1"=5'



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PROJECT NAME **LAKEWOOD WATER DISTRICT**

**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

CONSTRUCTION NOTES:

- 1 REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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LEGEND:

- ////// CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



Know what's below.
Call before you dig.

REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

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216-4104-017

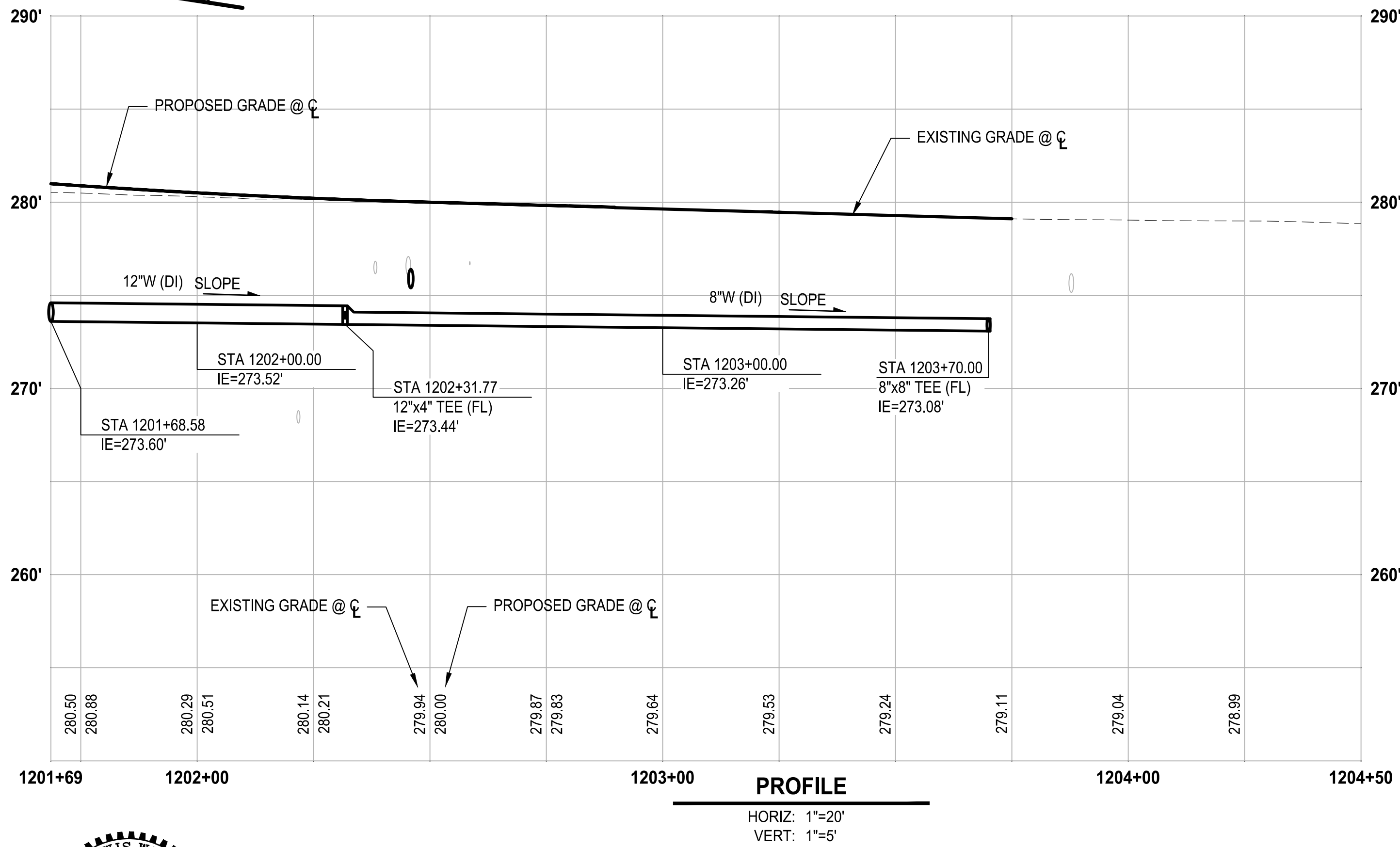
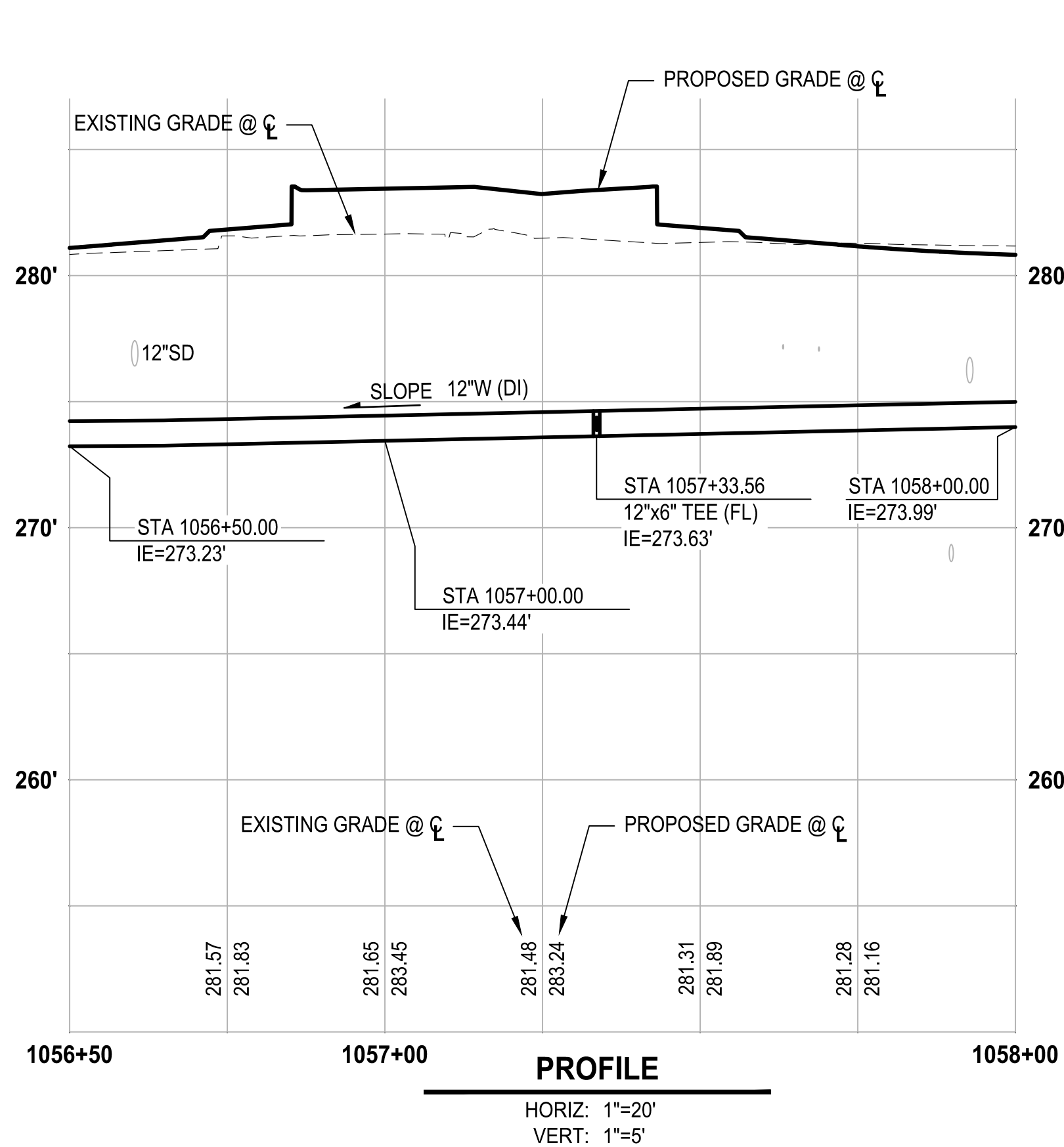
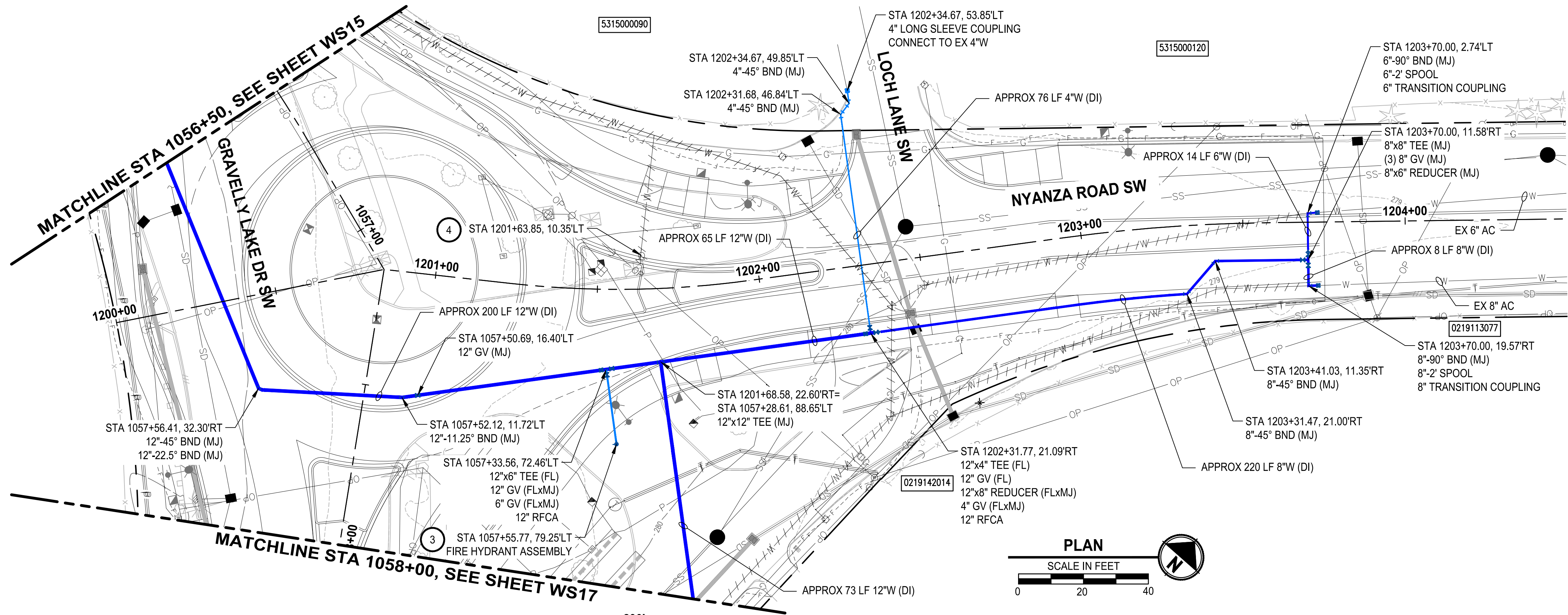
DATE
FEBRUARY 2021

**WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW**

DRAWING NO.
15 OF 21

WS15

PATH: U:\PSO\Projects\Clients\104-Lakewood Water Dist\216-1104-017 Gravelly Lake Drive Water Main Replacement\995\cadd\DWG PLOTTED BY: mahmoud.y. DATE: Friday, February 5, 2021 3:25:05 PM LAYOUT: WS16



CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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LEGEND:

- Cap and Abandon Existing Water Main
- Asphalt Pavement Restoration
- Concrete Pavement Restoration



Know what's below.
Call before you dig.

REVISIONS	DATE	BY	DESIGNED
			Y. MAHMOODI
			DRAWN
			Y. MAHMOODI
			CHECKED
			R. RAYMOND
			APPROVED
			J. WRIGHT

ONE INCH AT FULL SCALE.
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JOB NO.
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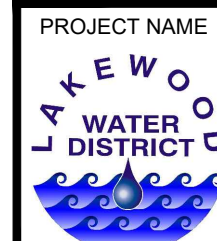
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PROJECT NAME
LAKWOOD WATER DISTRICT

**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**

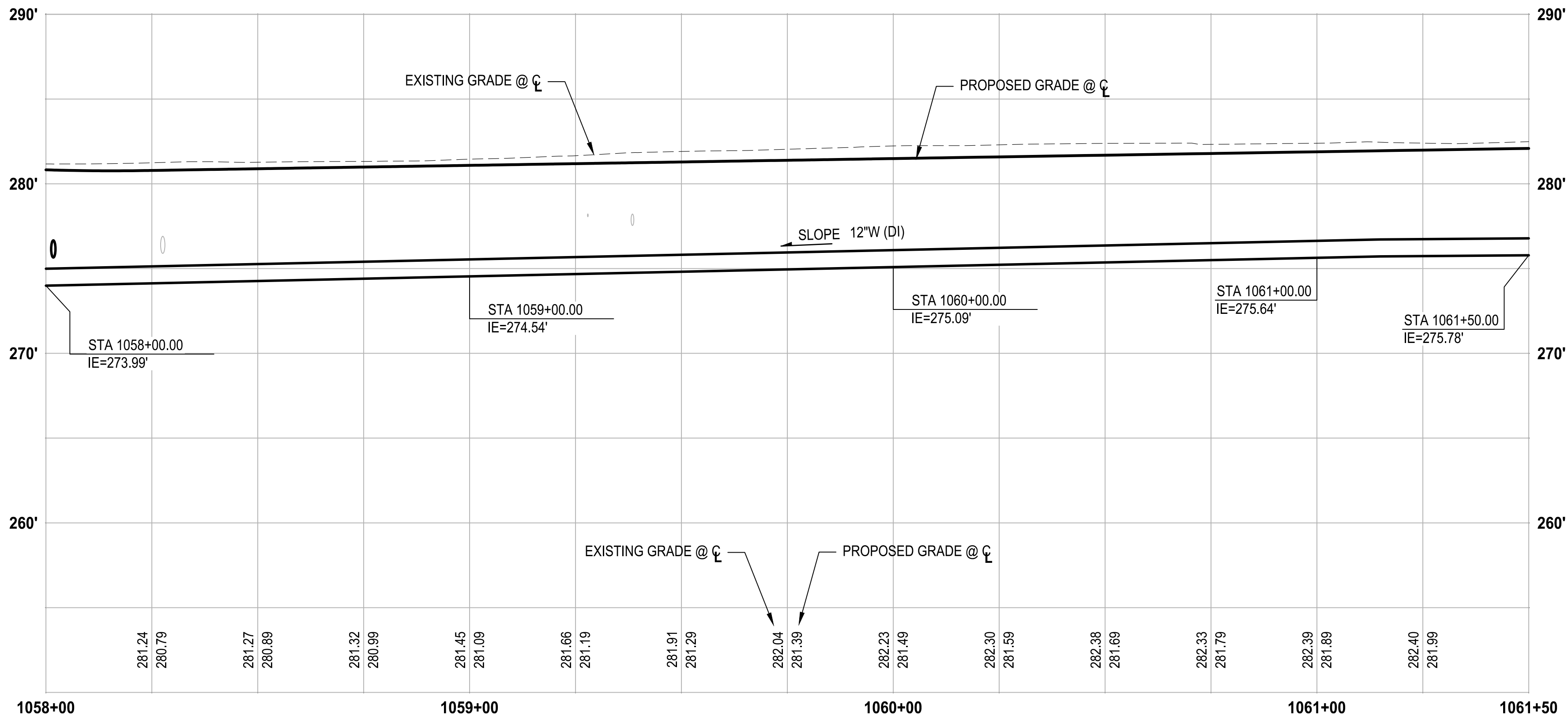
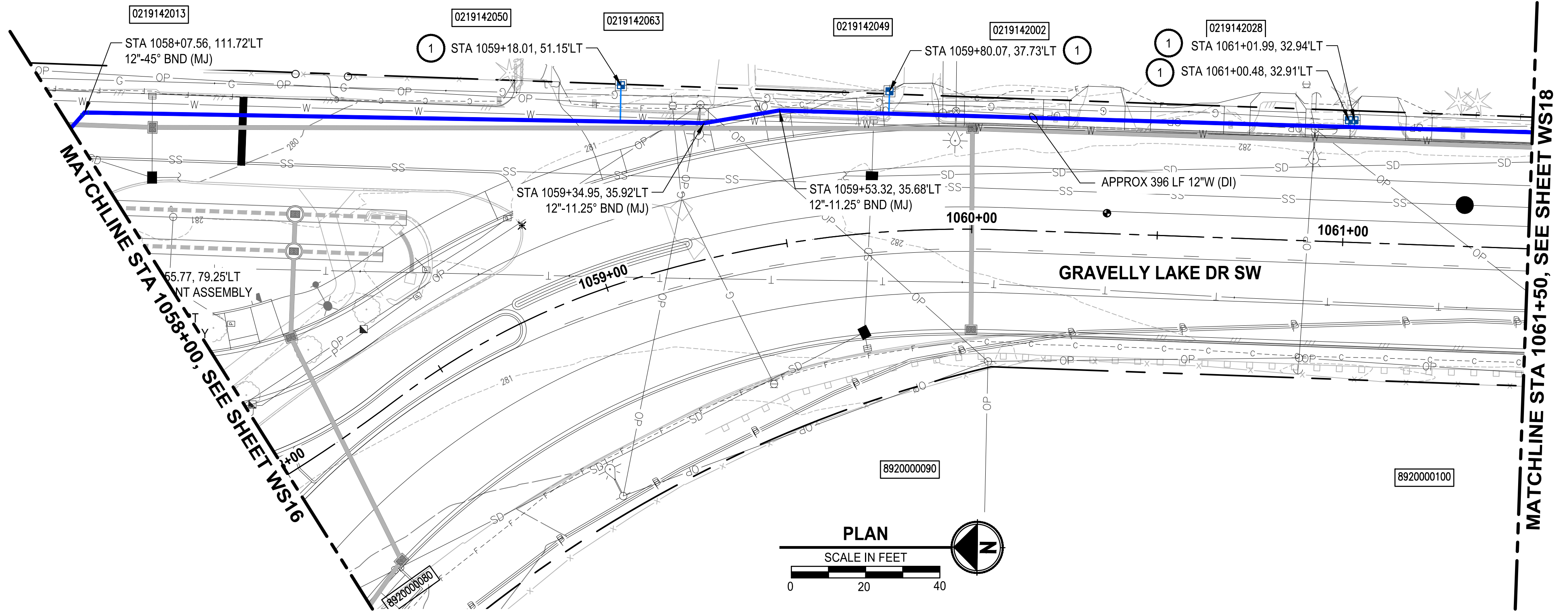
LAKEWOOD, WASHINGTON

WATER MAIN PLAN AND PROFILE
NYANZA ROAD SW

DRAWING NO.
16 OF 21

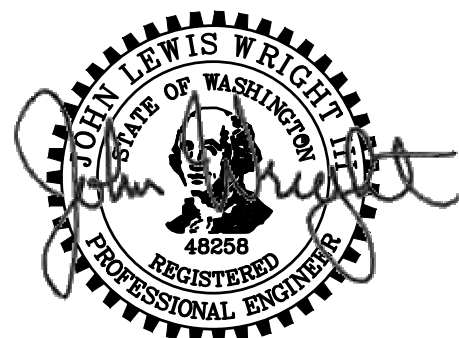
WS16

LAYOUT: WS17
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PROFILE

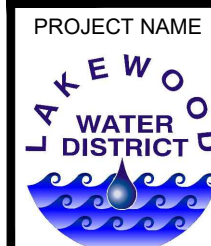
HORIZ: 1"=20'
VERT: 1"=5'



FEBRUARY 05, 2021

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PROJECT NAME
LAKEWOOD WATER DISTRICT

**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

CONSTRUCTION NOTES:

1. REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
2. WATER SERVICES LOCATED ON THE SIDE OF THE STREET OPPOSITE FROM THE WATER MAIN SHALL BE INSTALLED PER LWD DETAIL 7A IN A 2.5" PVC SCHEDULE 40 SOLVENT WELD JOINT SLEEVE JACKED OR PUSHED UNDER THE EXISTING ROADWAY PAVEMENT.
3. INSTALL NEW FIRE HYDRANT ASSEMBLY PER LWD DETAIL 9.
4. REMOVE EXISTING FIRE HYDRANT ASSEMBLY.
5. INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
6. REFER TO RH2 PLANS FOR CONTINUATION

NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING THE LOCATION, DEPTH, SIZE, MATERIAL, AND CONFIGURATION OF THE EXISTING WATER MAIN SYSTEM. VERIFICATION SHALL BE COMPLETED EARLY ENOUGH SO AS TO ADJUST PROPOSED WATER MAIN SYSTEM TO ACCOMMODATE ACTUAL CONDITIONS. UNDER NO CIRCUMSTANCES WILL LAKEWOOD WATER DISTRICT PAY THE CONTRACTOR ADDITIONAL MONIES TO RELAY WATER MAIN AND/OR FITTINGS INSTALLED UNDER THIS CONTRACT.
2. WHEN THE HORIZONTAL SEPARATION BETWEEN WATER AND SEWER IS LESS THAN 10-Feet, THE VERTICAL SEPARATION BETWEEN THE BOTTOM OF THE WATER MAIN AND THE CROWN OF THE SEWER SHALL BE 18-INCHES MINIMUM
3. ALL WATER MAIN JOINTS AND FITTINGS SHALL BE RESTRAINED.
4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. HYDROSEED ALL GRASS AREAS DISTURBED.
5. THE CONTRACTOR MAY INSTALL THE WATERMAIN AT THE STANDARD DEPTH SHOWN ON THE LAKEWOOD WATER DISTRICT'S STANDARD TRENCH DETAIL. ANY UTILITY CONFLICTS CREATED BY USING THE STANDARD LAKEWOOD WATER DISTRICT DEPTH SHALL BE MITIGATED THROUGH ADDITIONAL EXCAVATION AND FITTINGS AT THE SOLE COST OF THE CONTRACTOR.

LEGEND:

- ////// CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



Know what's below.
Call before you dig.

REVISIONS	DATE	BY	DESIGNED Y. MAHMOODI
			DRAWN Y. MAHMOODI
			CHECKED R. RAYMOND
			APPROVED J. WRIGHT

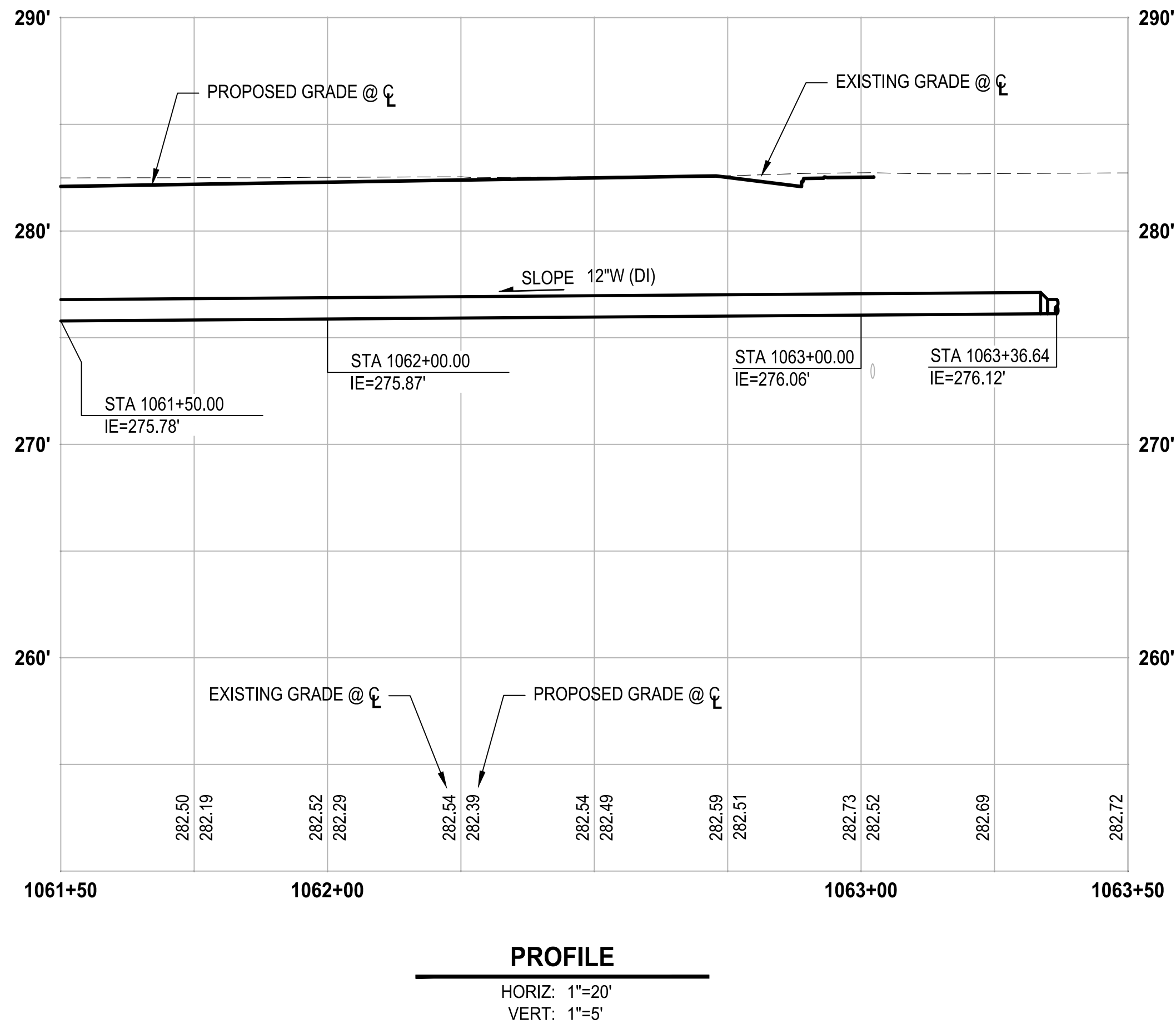
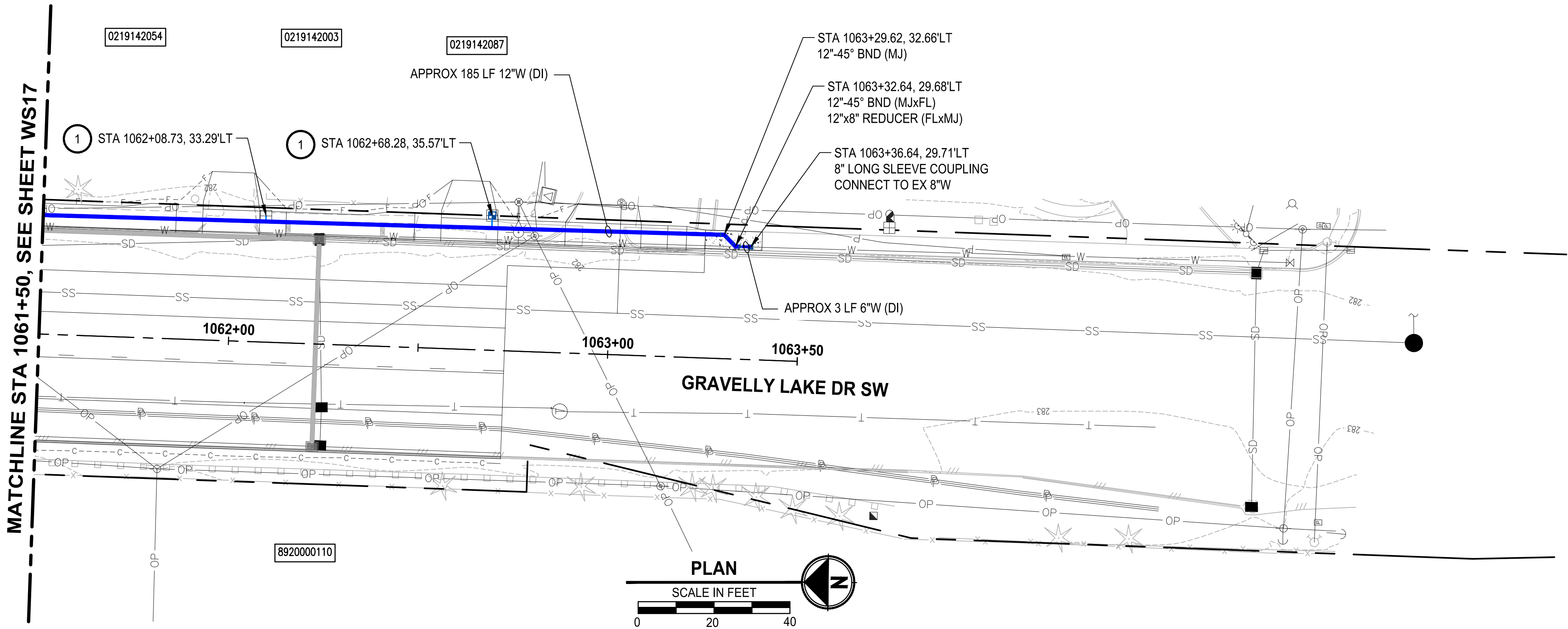
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FILE NAME PS4104017-WS12-19
JOB NO. 216-1104-017
DATE FEBRUARY 2021

**WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW**

DRAWING NO.
17 OF 21

WS17

LAYOUT: WS18 PATH: U:\PSO\Projects\Clients\104-Lakewood Water Dist\216-1104-017 Gravelly Lake SW\WMRepl\995\cadd\DWG PLOTTED BY: mahmoudy DATE: Friday, February 5, 2021 3:26:32 PM



CONSTRUCTION NOTES:

- 1 REPLACE WATER METER SERVICE PER LWD DETAIL 7A. INSTALL NEW 1" POLY PIPE FROM NEW MAIN TO NEW METER BOX AND SETTER, REMOVE AND REINSTALL EXISTING METER AND CONNECT TO PROPERTY SIDE WATER SERVICE PIPE.
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- 5 INSTALL NEW BLOWOFF ASSEMBLY PER LWD DETAIL 13.
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1. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING AND VERIFYING THE LOCATION, DEPTH, SIZE, MATERIAL, AND CONFIGURATION OF THE EXISTING WATER MAIN SYSTEM. VERIFICATION SHALL BE COMPLETED EARLY ENOUGH SO AS TO ADJUST PROPOSED WATER MAIN SYSTEM TO ACCOMMODATE ACTUAL CONDITIONS. UNDER NO CIRCUMSTANCES WILL LAKEWOOD WATER DISTRICT PAY THE CONTRACTOR ADDITIONAL MONIES TO RELAY WATER MAIN AND/OR FITTINGS INSTALLED UNDER THIS CONTRACT.
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4. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS BEYOND THE SCOPE OF THE ROADWAY AND SHOULDER IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. HYDROSEED ALL GRASS AREAS DISTURBED.
5. THE CONTRACTOR MAY INSTALL THE WATERMAIN AT THE STANDARD DEPTH SHOWN ON THE LAKEWOOD WATER DISTRICT'S STANDARD TRENCH DETAIL. ANY UTILITY CONFLICTS CREATED BY USING THE STANDARD LAKEWOOD WATER DISTRICT DEPTH SHALL BE MITIGATED THROUGH ADDITIONAL EXCAVATION AND FITTINGS AT THE SOLE COST OF THE CONTRACTOR.

LEGEND:

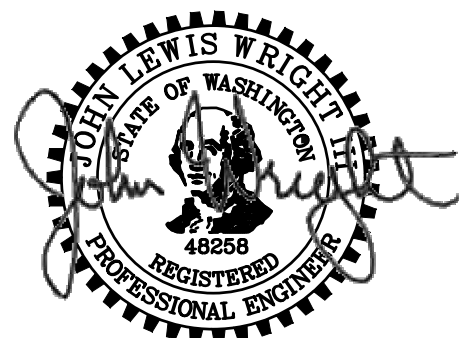
- CAP AND ABANDON EXISTING WATER MAIN
- ASPHALT PAVEMENT RESTORATION
- CONCRETE PAVEMENT RESTORATION



Know what's below.
Call before you dig.

REVISIONS	DATE	BY	DESIGNED Y. MAHMOODI
			DRAWN Y. MAHMOODI
			CHECKED R. RAYMOND
			APPROVED J. WRIGHT

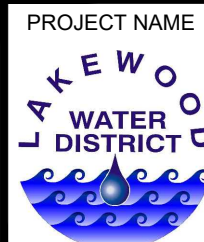
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FILE NAME PS4104017-WS12-19
JOB No. 216-1104-017
DATE FEBRUARY 2021



FEBRUARY 05, 2021

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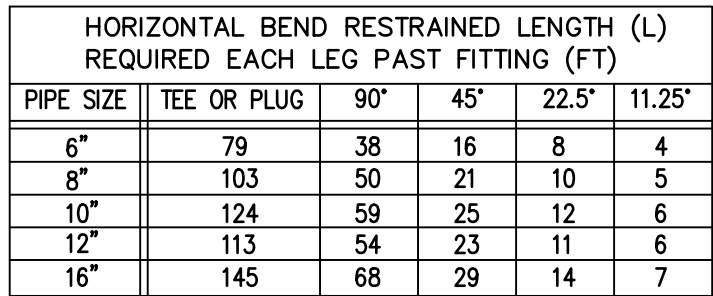
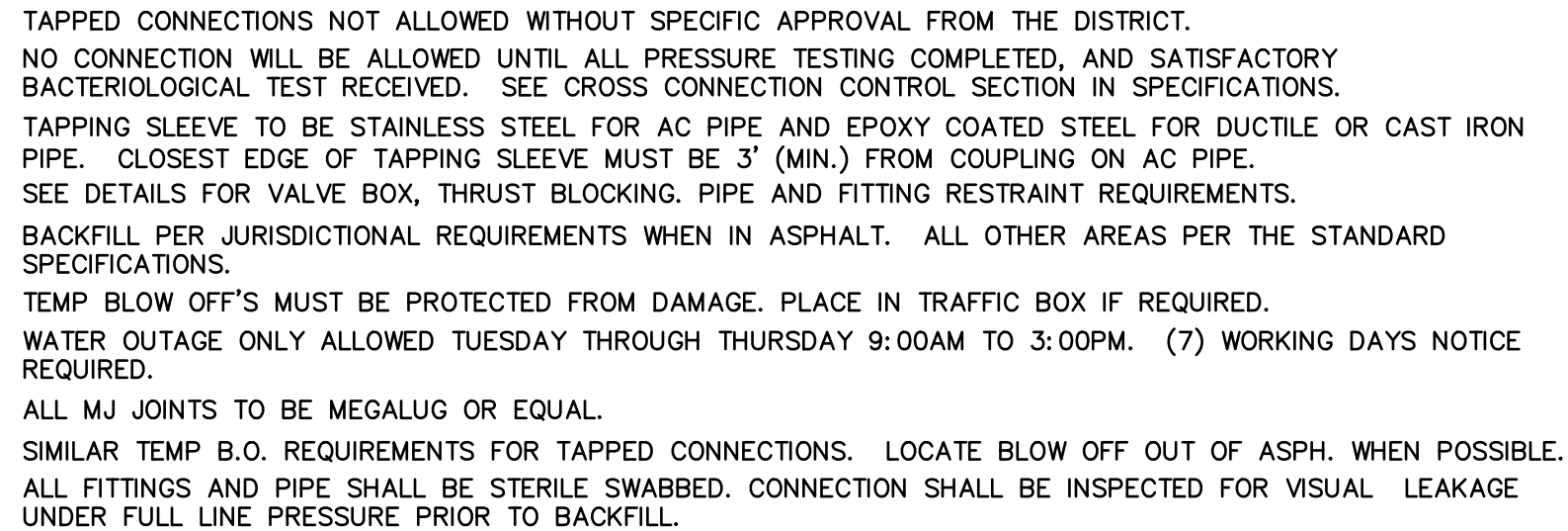
PROJECT NAME
LAKEWOOD WATER DISTRICT

**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT**
LAKEWOOD, WASHINGTON

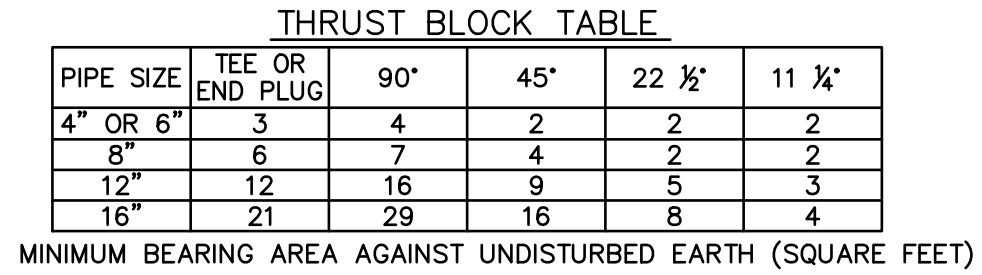
**WATER MAIN PLAN AND PROFILE
GRAVELLY LAKE DR SW**

DRAWING NO.
18 OF 21

WS18



1. RESTRAINED LENGTH SHALL BE ADJUSTED IF CONDITIONS DIFFER FROM ASSUMPTIONS.
 2. IF RESTRAINED LENGTH SHOWN IS NOT ACHIEVABLE, THRUST BLOCKS SHALL ALSO BE USED. SEE DETAIL 3.
 3. RESTRAINED LENGTHS CAN BE ADJUSTED WITH SITE SPECIFIC SOILS INFORMATION, ENGINEER DESIGN AND DISTRICT APPROVAL.
 4. MULTIPLE FITTINGS IN MULTIPLE PLANES SHALL BE DESIGNED AND STAMPED ON AN INDIVIDUAL BASIS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.
- ASSUMPTIONS:
1. TEST PRESSURE 200 PSI.
 2. LAYING CONDITION 3.
 3. SAND-SILT SOIL DESIGNATION.
 4. COVER ON 6"-10" DIA. AT 3 FEET; COVER ON 12"-16" DIA. AT 4 FEET.
 5. SAFETY FACTOR 1.5
 6. VALUES DEVELOPED WITH DIPRA THRUST RESTRAINT CALCULATOR.



1. BEARING AREA OF CONC. THRUST BLOCK BASED ON 200 PSI PRESSURE AND SOIL BEARING LOAD OF 2000 POUNDS PER SQUARE FOOT.
2. AREAS MUST BE ADJUSTED FOR OTHER SIZE PIPES, PRESSURES AND SOIL CONDITIONS.
3. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF $\frac{1}{4}$ SQUARE FOOT BEARING AGAINST THE FITTING. SIDES SHALL BE FORMED WITH PLYWOOD OR EQUIVALENT.
4. THRUST BLOCK SHALL BEAR AGAINST FITTING ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT DISMANTLING OF JOINTS.
5. CONCRETE TO BE 3000 PSI MINIMUM. PRE-MIX CONCRETE IS PREFERRED. IF CONCRETE IS HAND MIXED THE PROPORTIONS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. COMPRESSIVE TESTS OF "HAND MIXED" CONCRETE MAY BE REQUIRED. PRE-INSPECTION OF BLOCKING AREA REQUIRED PRIOR TO PLACEMENT OF CONCRETE.
6. CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.
7. SEE STANDARD PLAN NO. 2 FOR PIPE AND FITTING RESTRAINT REQUIREMENTS.

1. RESTRAINED LENGTH SHALL BE ADJUSTED IF CONDITIONS DIFFER FROM ASSUMPTIONS.
2. IF RESTRAINED LENGTH SHOWN IS NOT ACHIEVABLE, THRUST BLOCKS SHALL ALSO BE USED. CONTACT DISTRICT FOR THRUST BLOCKING DETAIL.
3. ALL PIPE BETWEEN VERTICAL BENDS SHALL BE RESTRAINED.
4. RESTRAINED LENGTHS CAN BE ADJUSTED WITH SITE SPECIFIC SOILS INFORMATION, ENGINEER DESIGN AND DISTRICT APPROVAL.
5. 90° VERTICAL BENDS ARE NOT ALLOWED.
6. MULTIPLE FITTINGS IN MULTIPLE PLANES SHALL BE DESIGNED AND STAMPED ON AN INDIVIDUAL BASIS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF WASHINGTON.

ASSUMPTIONS:

1. TEST PRESSURE 200 PSI.
2. LAYING CONDITION 3.
3. SAND-SILT SOIL DESIGNATION.
4. SHALLOW END COVER ON 6"-10" DIA. AT 3 FEET; COVER ON 12"-16" DIA. AT 4 FEET.
5. LENGTH BETWEEN FITTINGS ASSUMED TO BE 4 FEET SO KNOWN LENGTH IS 2 FEET.
6. SAFETY FACTOR 1.5
7. VALUES DEVELOPED WITH DIPRA THRUST RESTRAINT CALCULATOR.

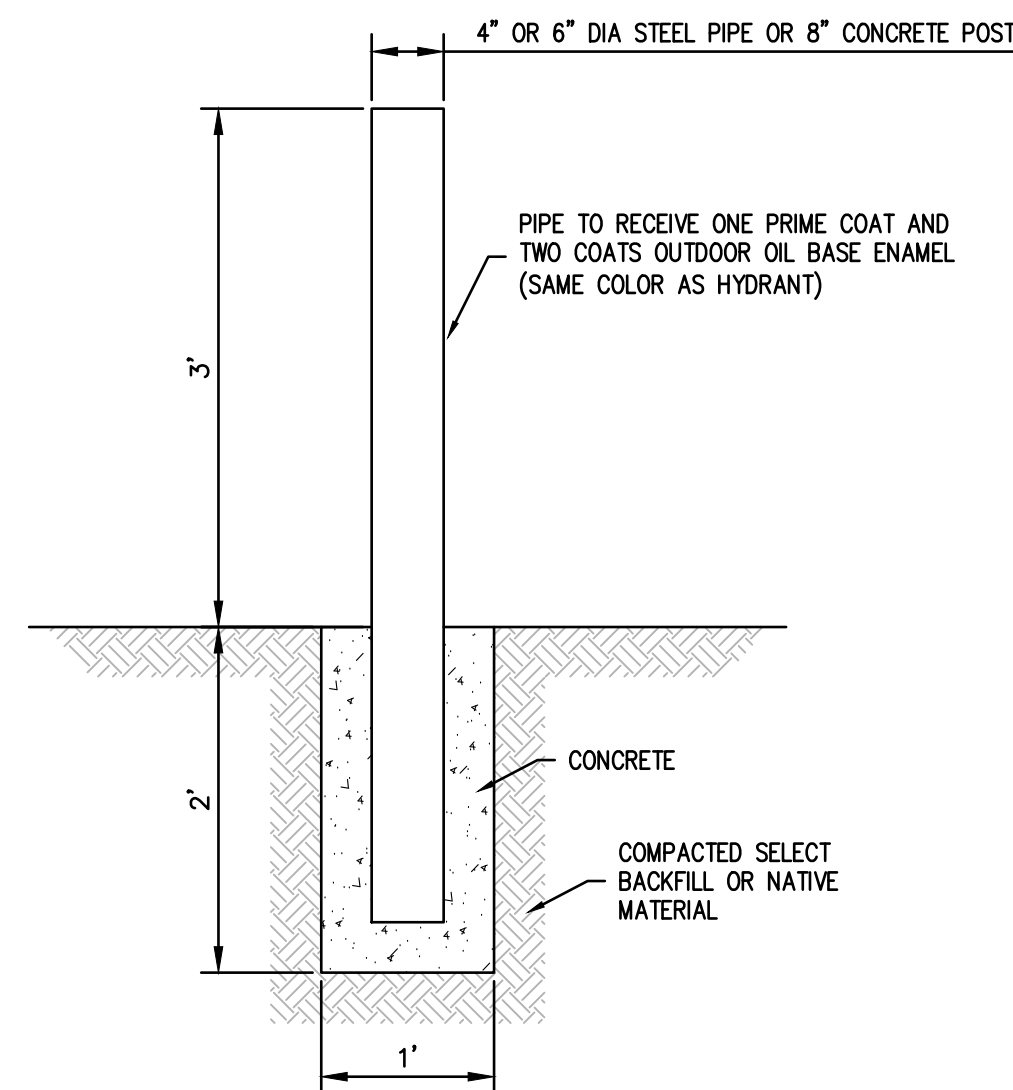
1. VALVE BOX TO BE 045/046 – SEATTLE/TACOMA TOP AND LID.
2. VALVE BOX LIDS TO BE 4" DEEP IN TRAFFIC AREAS AND A MIN. OF 3" IN OTHER LOCATIONS. LOCKING VALVE BOX LIDS (AMPRO STYLE 940) REQUIRED IF LIDS WILL NOT STAY PUT DUE TO TRAFFIC.
3. SAWCUT VALVE BOX COMPONENTS. BROKEN OR JAGGED VALVE BOX SECTIONS NOT ACCEPTABLE.
4. OVERLAY ADJUSTMENT RINGS NOT ALLOWED, UNLESS APPROVED BY THE DISTRICT.
5. VALVE BOX COLLARS REQUIRED IF VALVE BOX OUT OF PAVING. COLLARS TO BE FLUSH WITH FINISH SURFACE. SLOPE COLLARS AWAY FROM LID @ 2% (TYP.)
6. VALVE BOX LIDS TO BE PAINTED (2) COATS SAFETY YELLOW PAINT.
7. VALVE BOX COLLAR REQUIRED WHEN VALVE BOX OUTSIDE OF PAVING.
8. VALVE BOXES SHALL BE ADJUSTED AFTER PAVING AND PATCHED AS SHOWN ABOVE. VALVES CONNECTED TO THE EXISTING SYSTEM SHALL BE MADE ACCESSIBLE AT ALL TIMES.

1. BEDDING REQUIRED ONLY IF DIRECTED BY THE DISTRICT DUE TO NATIVE SOIL CONDITIONS. BEDDING SHALL BE $\frac{3}{4}$ " CRUSHED SURFACING IF NATIVE MATERIAL IS JUDGED UNSUITABLE BY THE DISTRICT. BEDDING UNDER ASPHALT OR CONCRETE PAVEMENT AREAS SHALL BE CRUSHED ROCK $\frac{3}{4}$ " MINUS.
2. PUMPING SOILS SHALL BE REMOVED FROM THE TRENCH BACKFILL IMMEDIATELY.
3. TEMPORARY PATCH TO BE BACKFILLED AND COMPACTED TO EXISTING GROUND LINE AND PATCHED WITH CRUSHED ROCK SURFACING OR HMA $\frac{1}{2}$ " PG 64-22. TEMPORARY PATCH SHALL BE 2" THICK OR AS DIRECTED BY LWD INSPECTOR.
4. BACKFILL MATERIAL PLACED IN 6" LIFTS AND COMPACTED TO 95% MAXIMUM DENSITY. BACKFILL OF THE TOP 18" SHALL BE CRUSHED ROCK $\frac{3}{4}$ " MINUS UNDER ASPHALT OR CONCRETE PAVEMENT AND NATIVE MATERIAL IN GRAVEL AREAS IF APPROVED BY THE DISTRICT.

FEBRUARY 05, 2021

NSD2

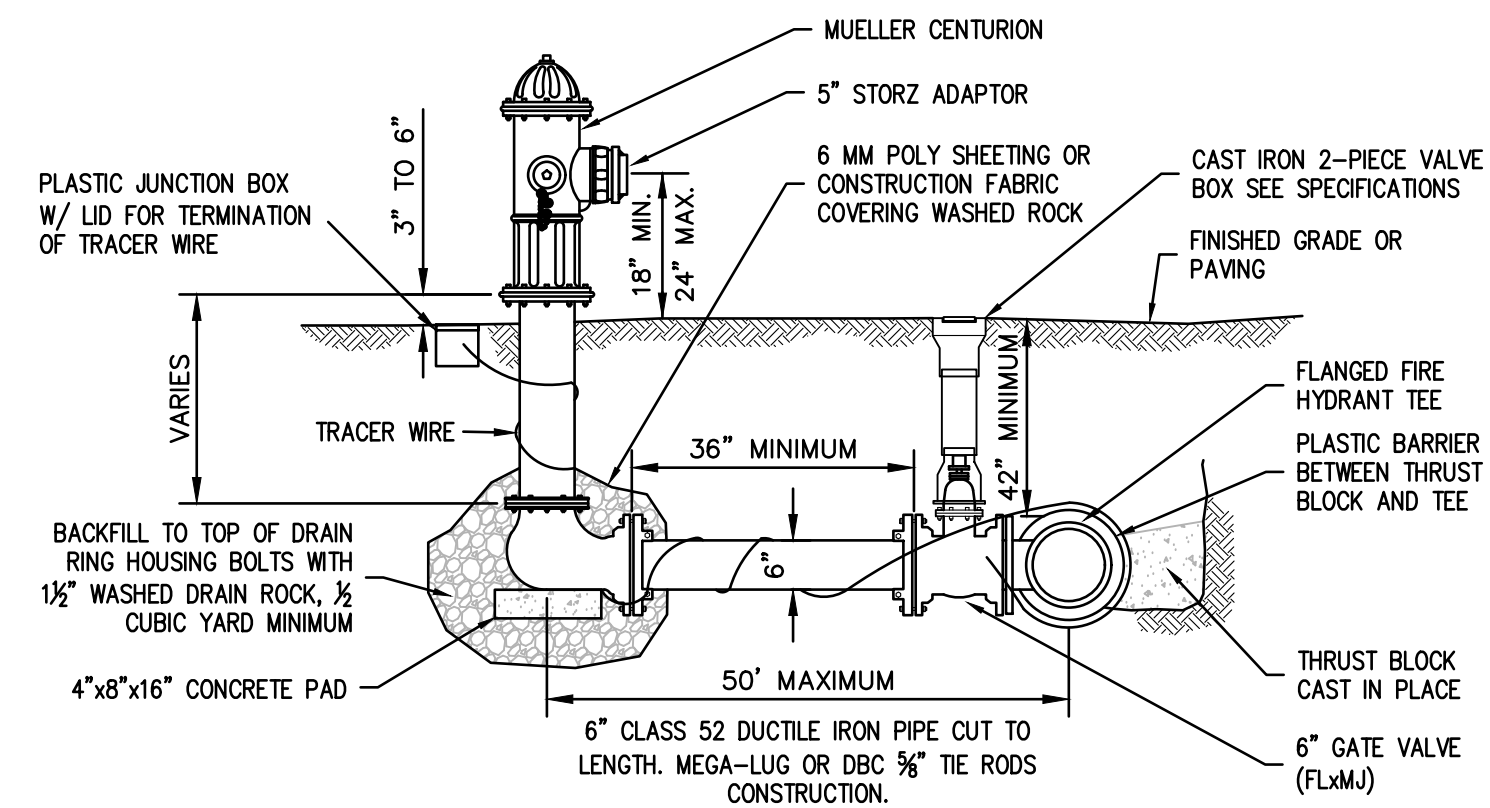




NOTE:

LOCATE BOLLARDS 3' MINIMUM FROM HYDRANT DO NOT BLOCK HYDRANT PORTS.

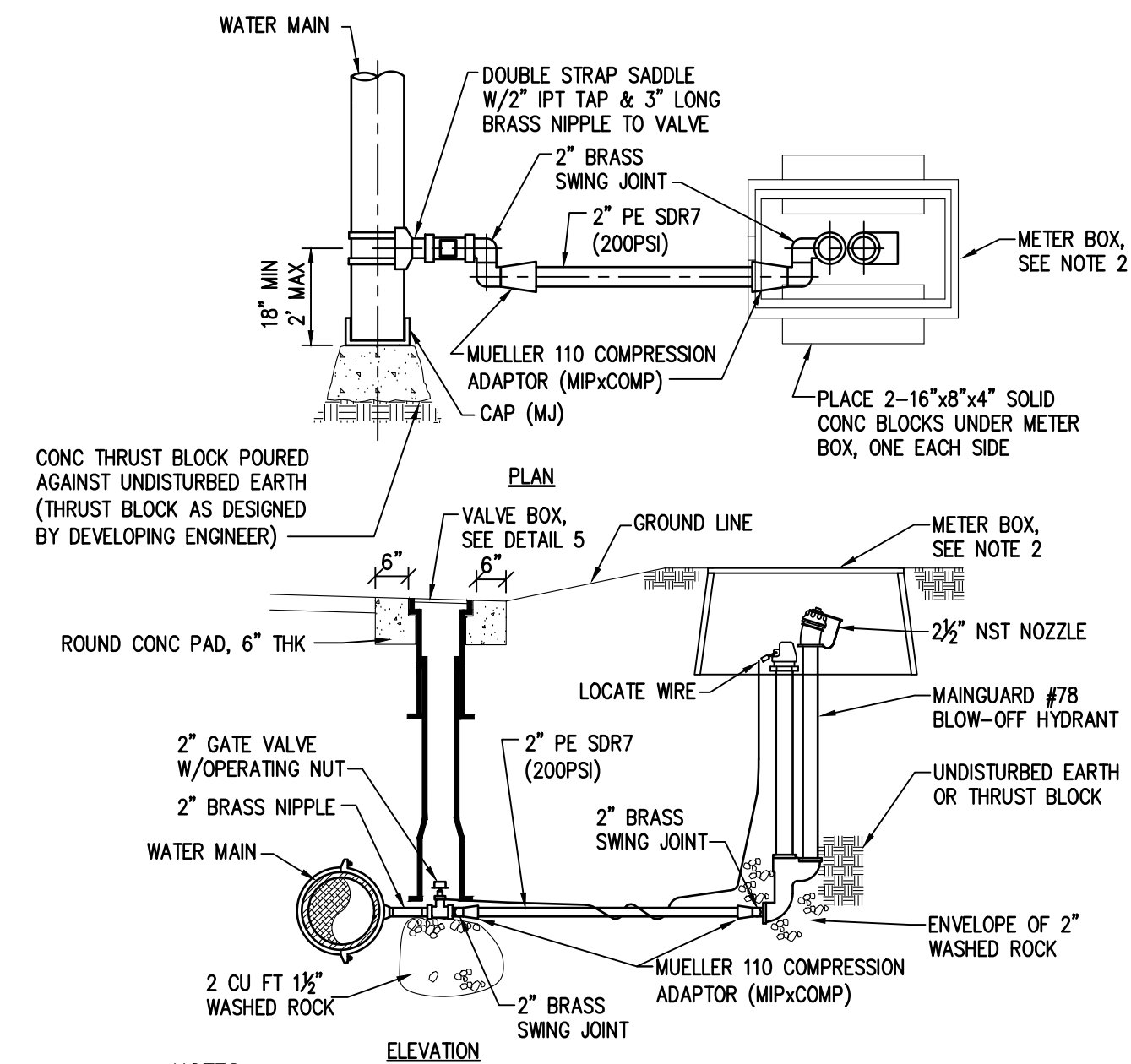
8 HYDRANT BOLLARD



NOTES:

1. ANY HYDRANT SETBACK LONGER THAN ONE FULL LENGTH OF PIPE THAT REQUIRES A BELL AND SPICKEST WILL NEED A FIELD LOCK GASKET, AND MAY REQUIRE A THRUST BLOCK AT THE DIRECTION OF THE INSPECTOR.
2. MAINTAIN MINIMUM 3' RADIUS UNOBSTRUCTED WORKING AREA AROUND HYDRANT INCLUDING FUTURE IMPROVEMENTS.

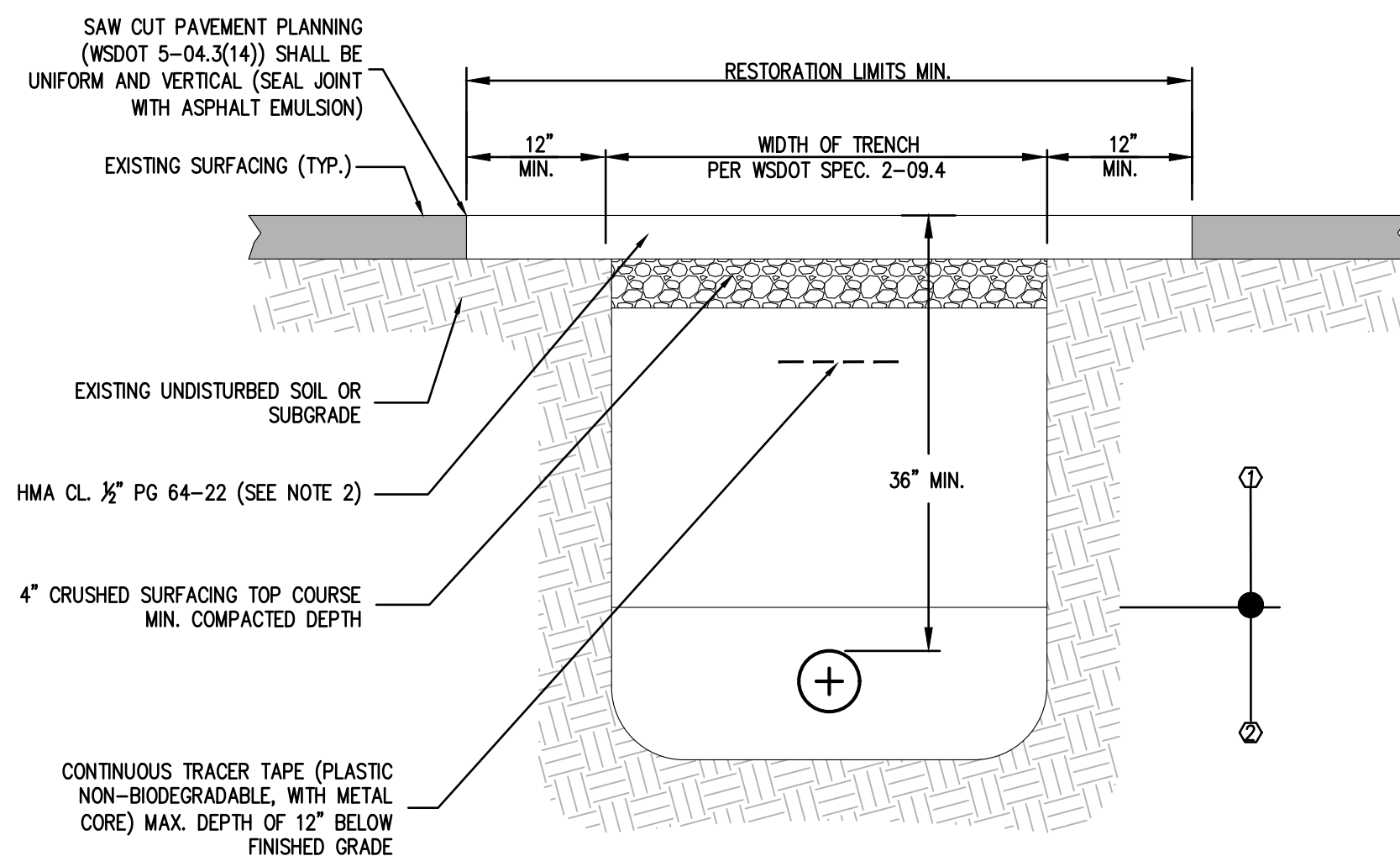
9 FIRE HYDRANT



NOTES:

1. BLOW-OUT HYDRANTS SHALL BE #78 MAINGUARD HYDRANT (THE KUPFERLE FOUNDRY CO).
2. SET UNDERGROUND IN ARMORCAST B36 W/ LID OR EQUIVALENT CARSON HD BOX & LID, (30"x17"x12").
3. THE OUTLET SHALL ALSO BE BRONZE AND BE 2-1/2" NST.
4. HYDRANTS SHALL BE LOCKABLE TO PREVENT UNAUTHORIZED USE.
5. LOCATE WIRE SHALL BE 10 GAUGE WIRE FROM 2" GV TO METER BOX W/ 6" MIN EXPOSED WITHIN BOX.
6. TRUST BLOCKS TO BE DETERMINED BY LWD INSPECTOR.

13 BLOWOFF ASSEMBLY (2")

**RESTORATION GENERAL NOTES:**

1. MATERIALS AND CONSTRUCTION REQUIREMENTS SHALL BE PER LATEST EDITION OF WSDOT STANDARD SPECIFICATIONS FOR ROAD BRIDGE, AND MUNICIPAL CONSTRUCTION UNLESS OTHERWISE NOTED.
2. COMPACTED HMA DEPTH SHALL BE 3" MINIMUM OR AS SHOWN IN PLANS OR PERMIT, WHICHEVER IS GREATER, AND SHALL BE COMPACTED TO 92% OF RICE DENSITY.

DETAIL GENERAL NOTES:


1. ALL PATCHES ACROSS CITY STREETS SHALL CONFORM TO THIS DETAIL.

BACKFILL COMPACTION LEGEND

- ① BACKFILL MATERIAL SHALL BE PLACED IN 6" LIFTS AND COMPACTED TO MINIMUM OF 95% MAXIMUM DENSITY OF THE MODIFIED PROCTOR PER ASTM 1557.
- ② BEDDING MATERIAL SHALL BE PLACED IN 4" LIFTS AND COMPACTED TO MINIMUM OF 95% MAXIMUM DENSITY OF THE MODIFIED PROCTOR PER ASTM 1557.

11 CITY OF LAKEWOOD TRENCH PATCH DETAIL

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				DRAWN Y. MAHMOODI
				CHECKED R. RAYMOND
				APPROVED J. WRIGHT

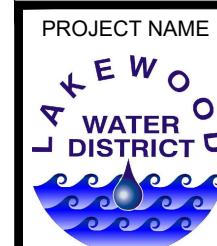
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FILE NAME	PS4104017-WSD01-03
JOB No.	216-4104-017
DATE	FEBRUARY 2021



FEBRUARY 05, 2021



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**LAKEWOOD WATER DISTRICT**

**GRAVELLY LAKE DRIVE
WATER MAIN REPLACEMENT
LAKEWOOD, WASHINGTON**

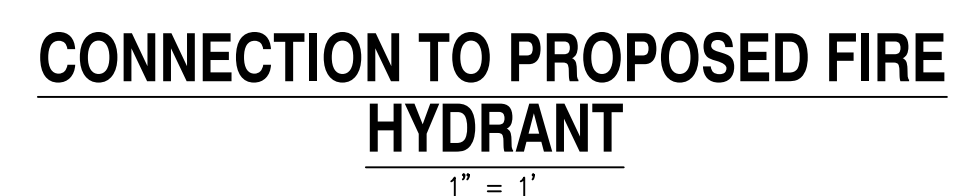
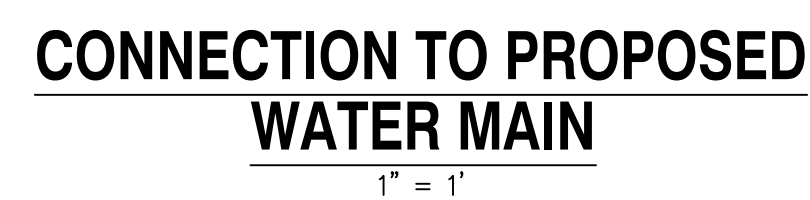
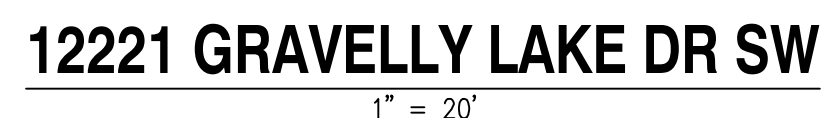
LAKEWOOD WATER DISTRICT DETAILS

DRAWING NO.
21 OF 21

WSD3



Know what's **below**.
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EXACT LOCATION FOR FIRE HYDRANT AND METER SHALL BE DETERMINED BY LAKEWOOD WATER DISTRICT INSPECTOR.

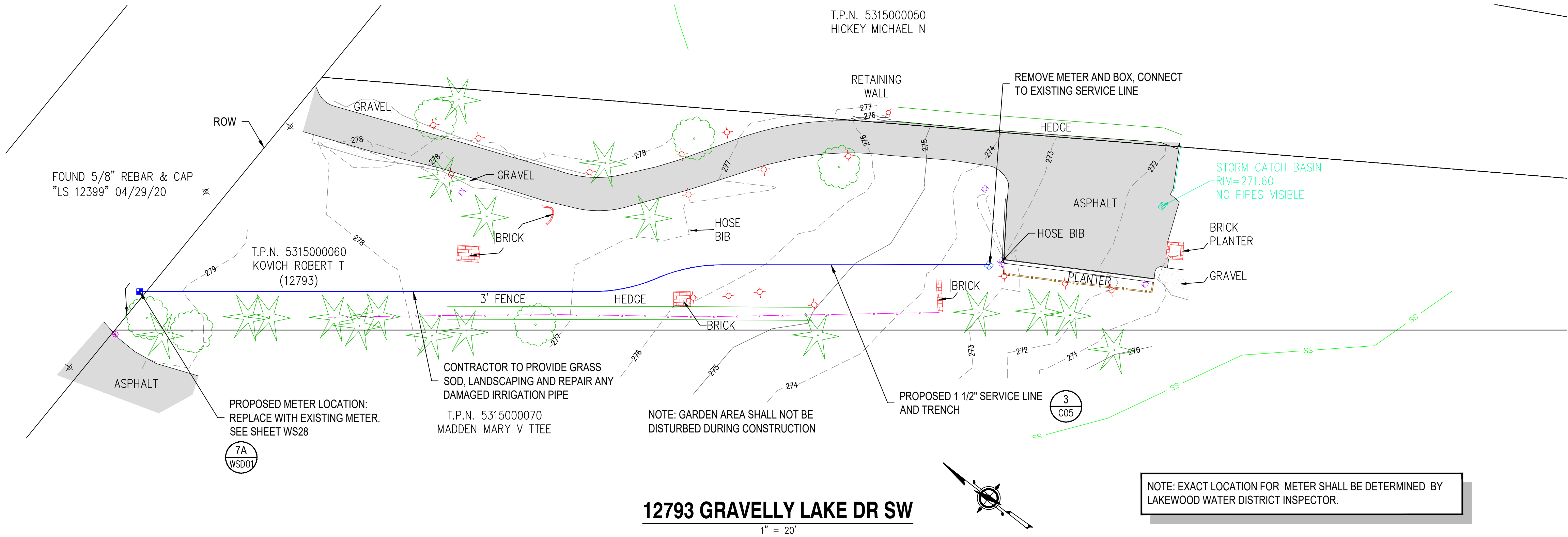
IN LIEU OF FLANGES ON DUCTILE IRON FITTINGS AND VALVES, FOSTER ADAPTORS MANUFACTURED BY INFACOT CORPORATION, OR APPROVED EQUAL, WILL BE USED TO ALLOW MECHANICAL JOINT RESTRAINT.



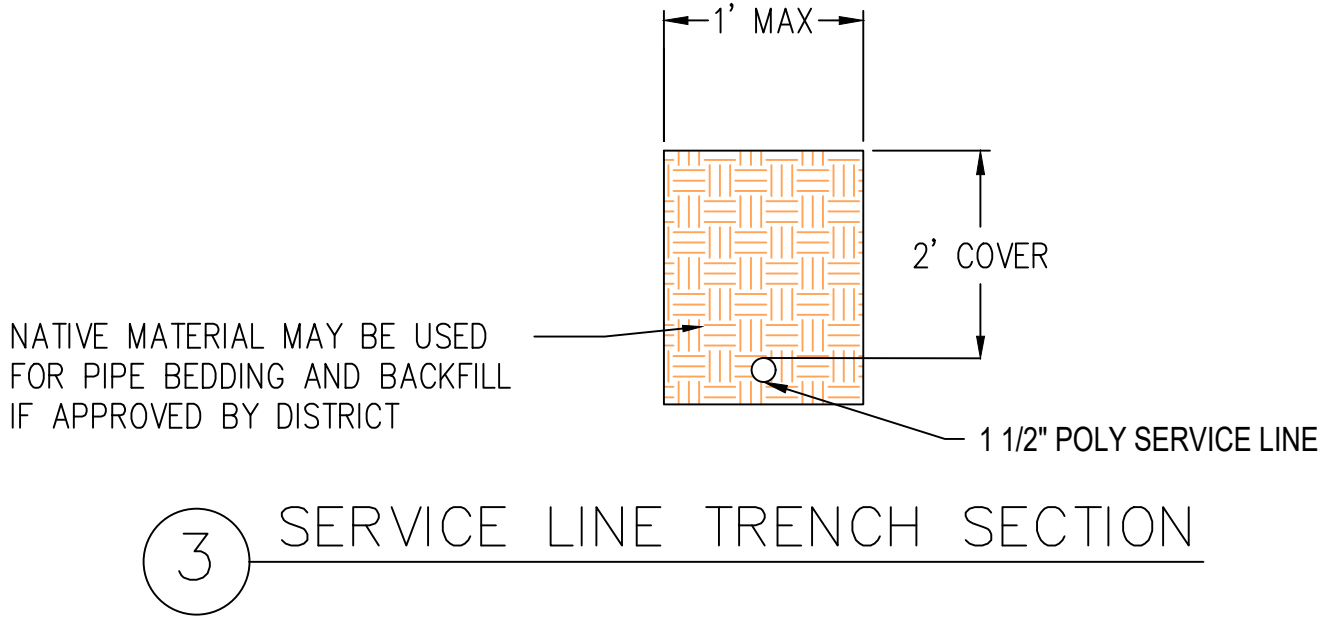
REVISIONS

PRELIMINARY REVIEW
DRAWINGS

C02	02		06
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GARDEN AREA TO BE AVOIDED



SIGNED: 01/28/2021

SIGNED: 01/28/2021

LAKEWOOD WATER DISTRICT

GRAVELLY LAKE DRIVE

HYDRANT AND METER REPLACEMENT

12793 GRAVELLY LAKE DRIVE

ENGINEER: JMO	DATE: Jan 28, 2021	CLIENT: LAK	LOG NO.: 519-154						
REVIEWED: DJM	DATE: Jan 28, 2021	FILENAME: GRAV-D-CV01.DWG							
<div>REVISIONS</div> <div>PRELIMINARY REVIEW</div> <div>DRAWINGS</div>									
NO.	DATE	DESCRIPTION	BY	REVIEW					

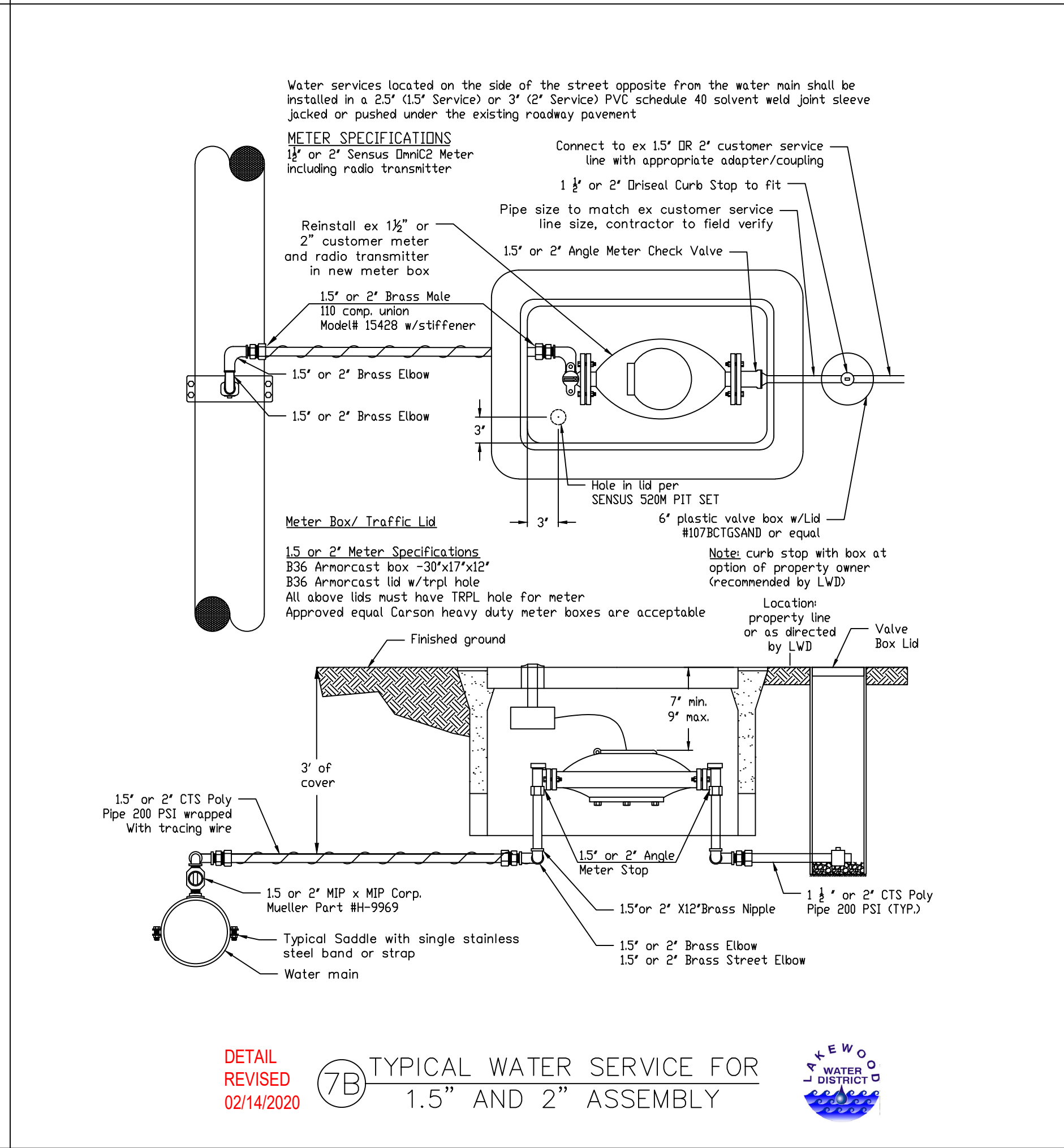
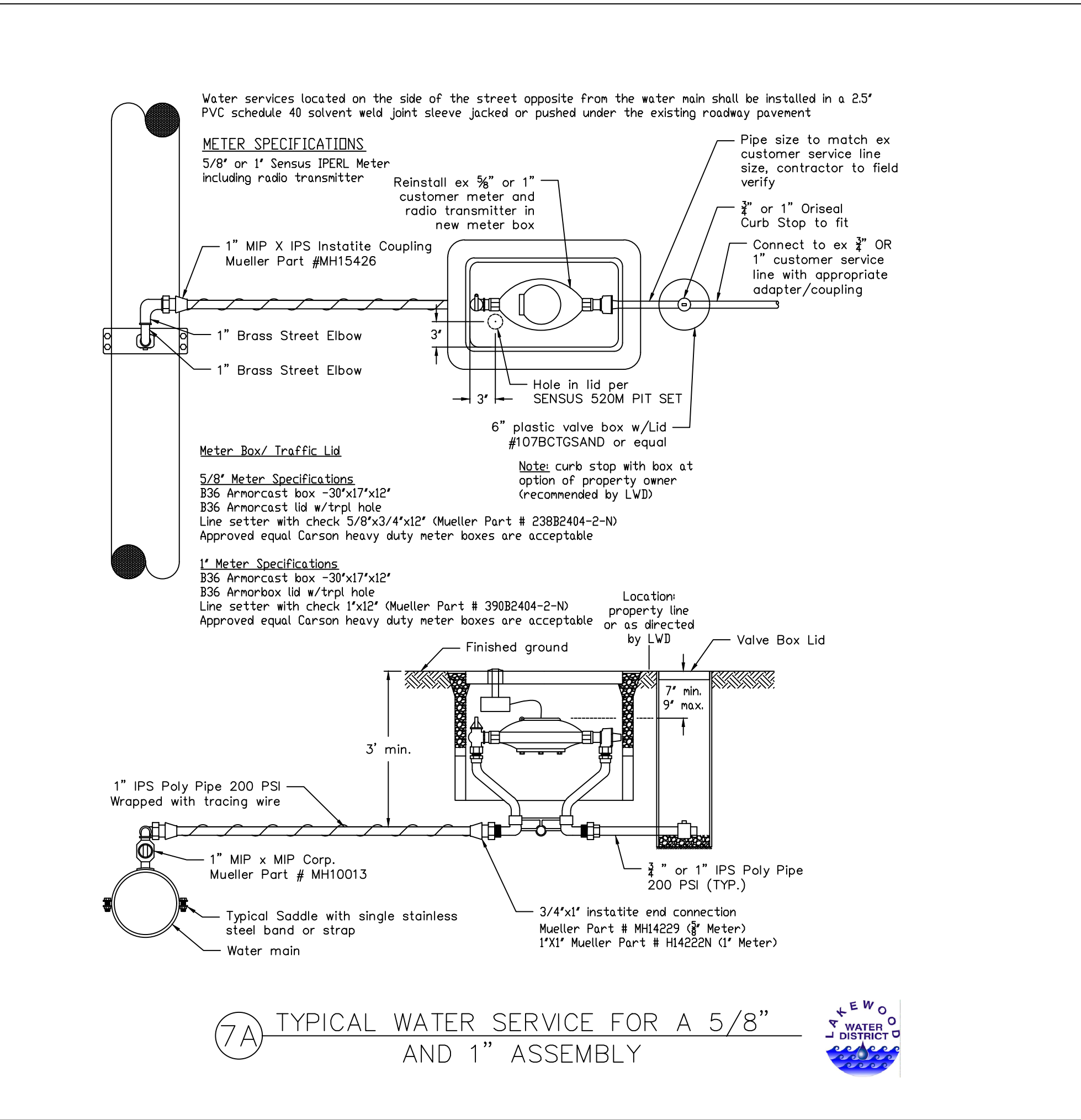
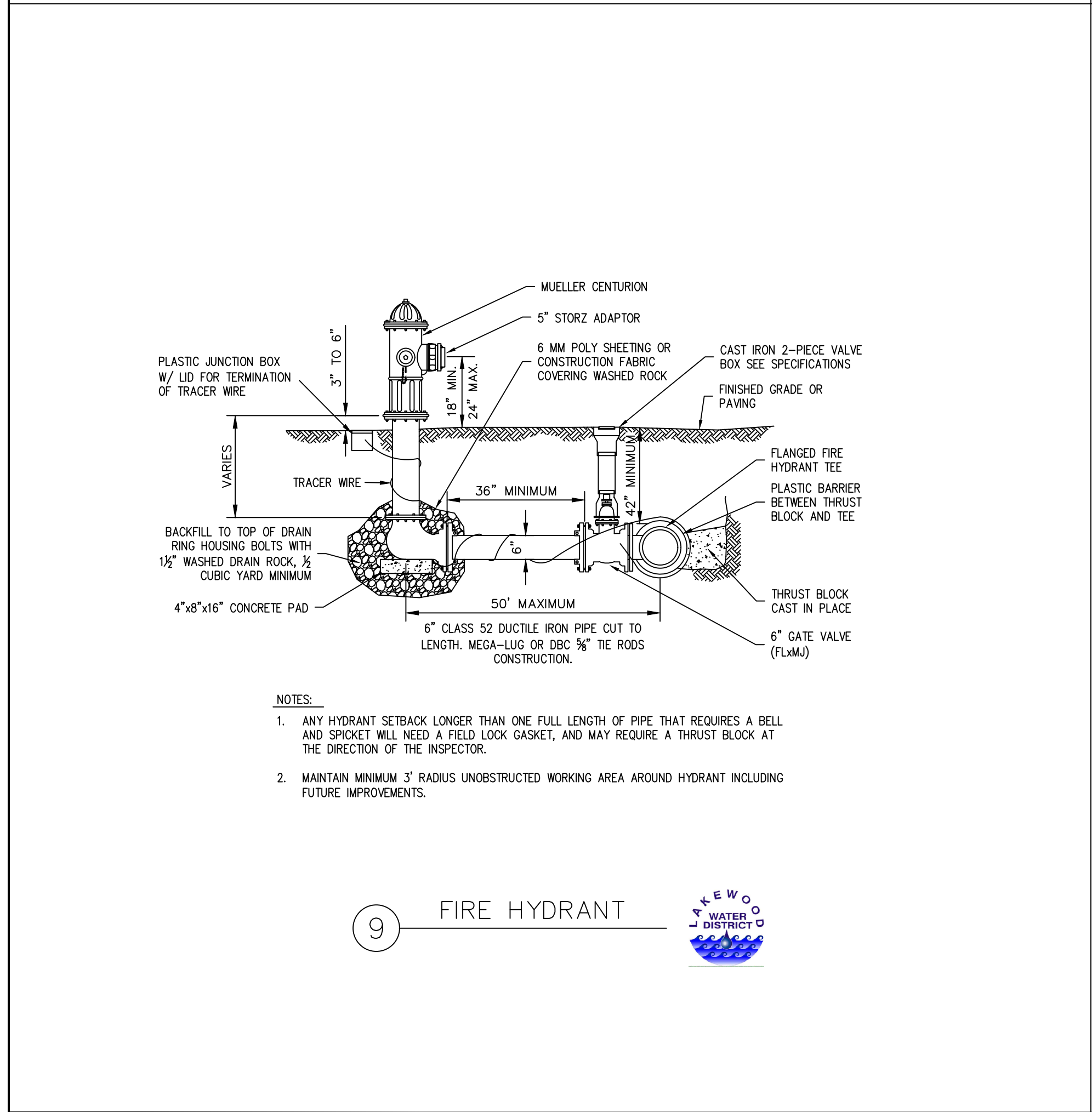
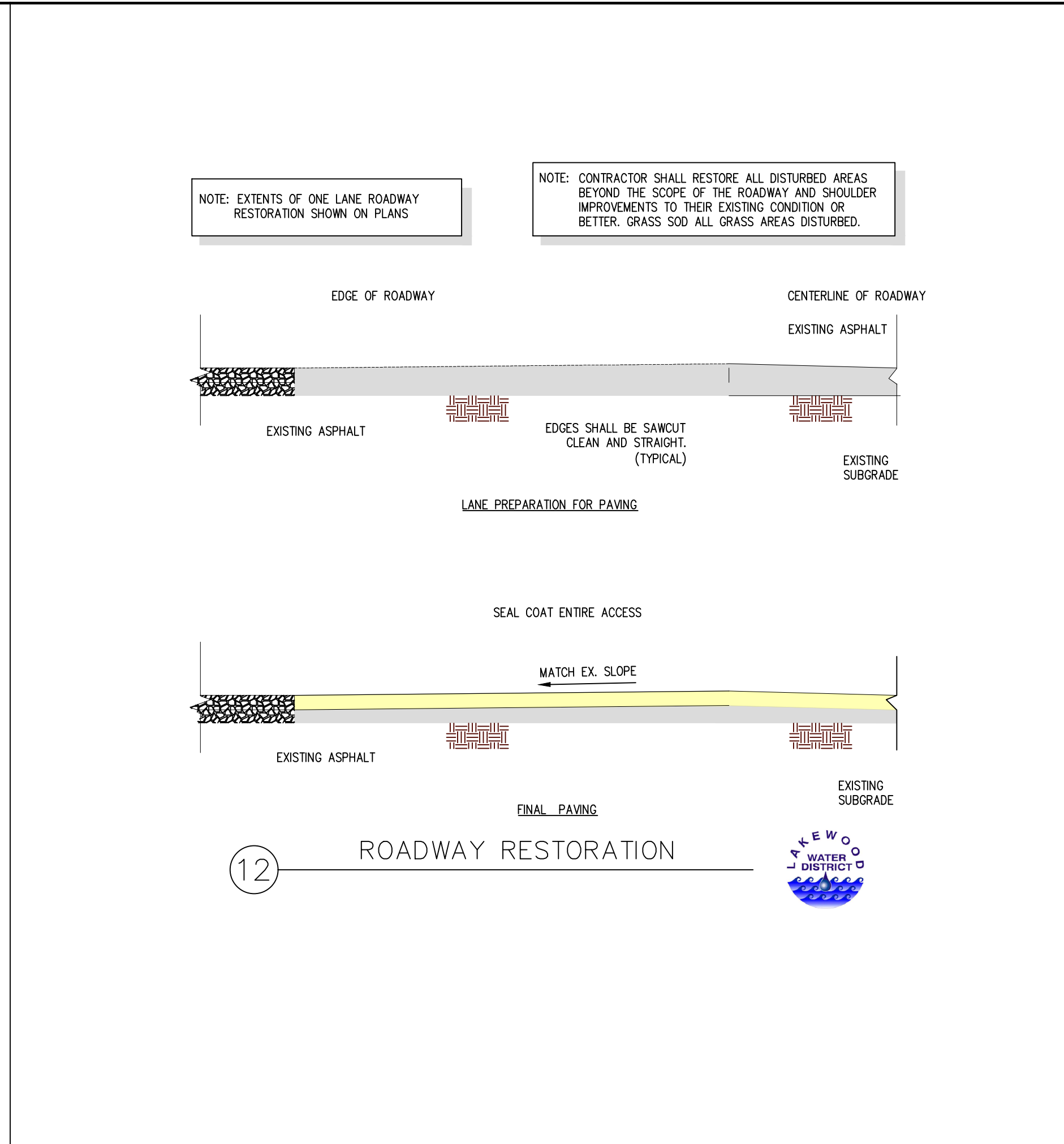
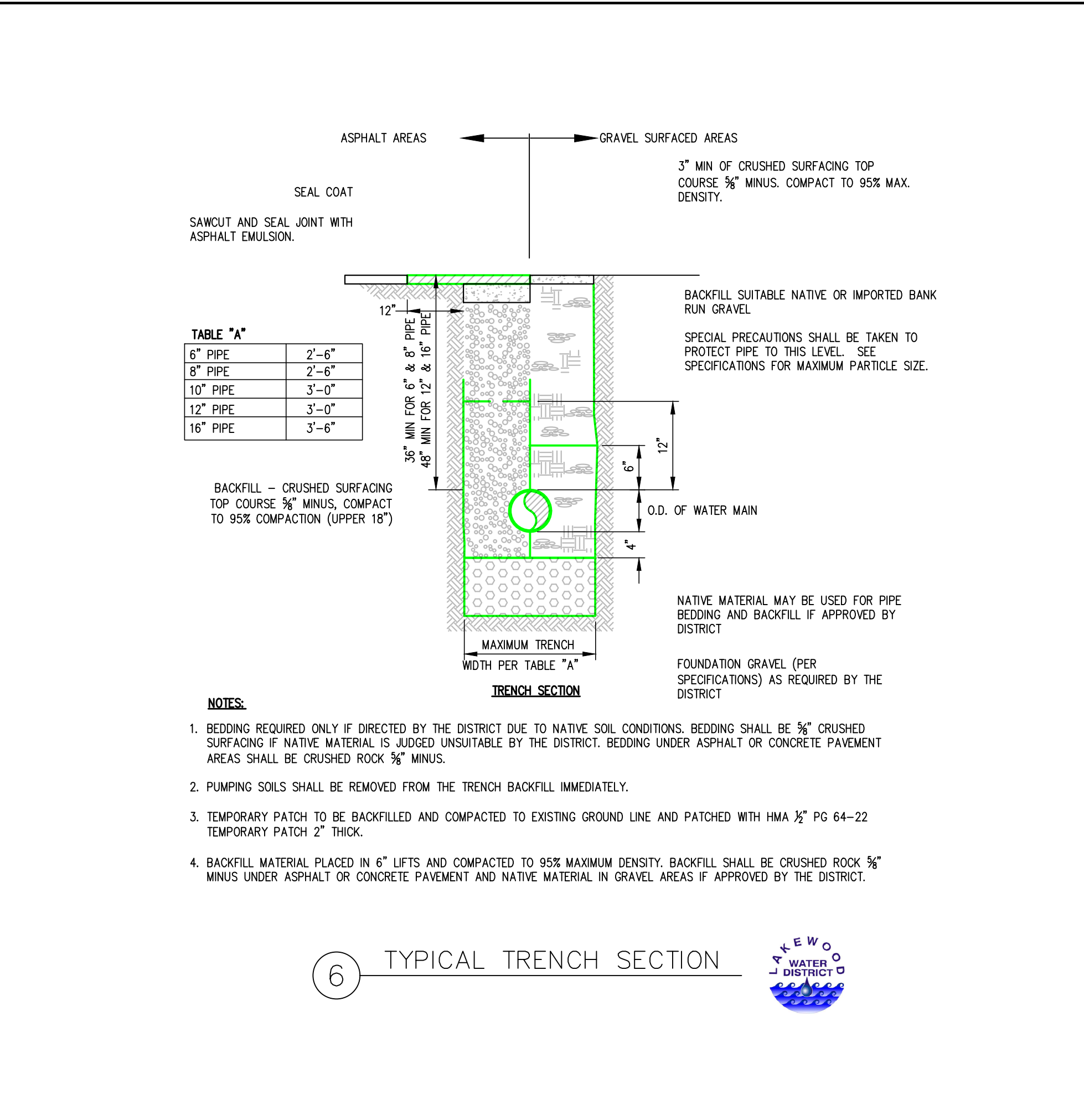
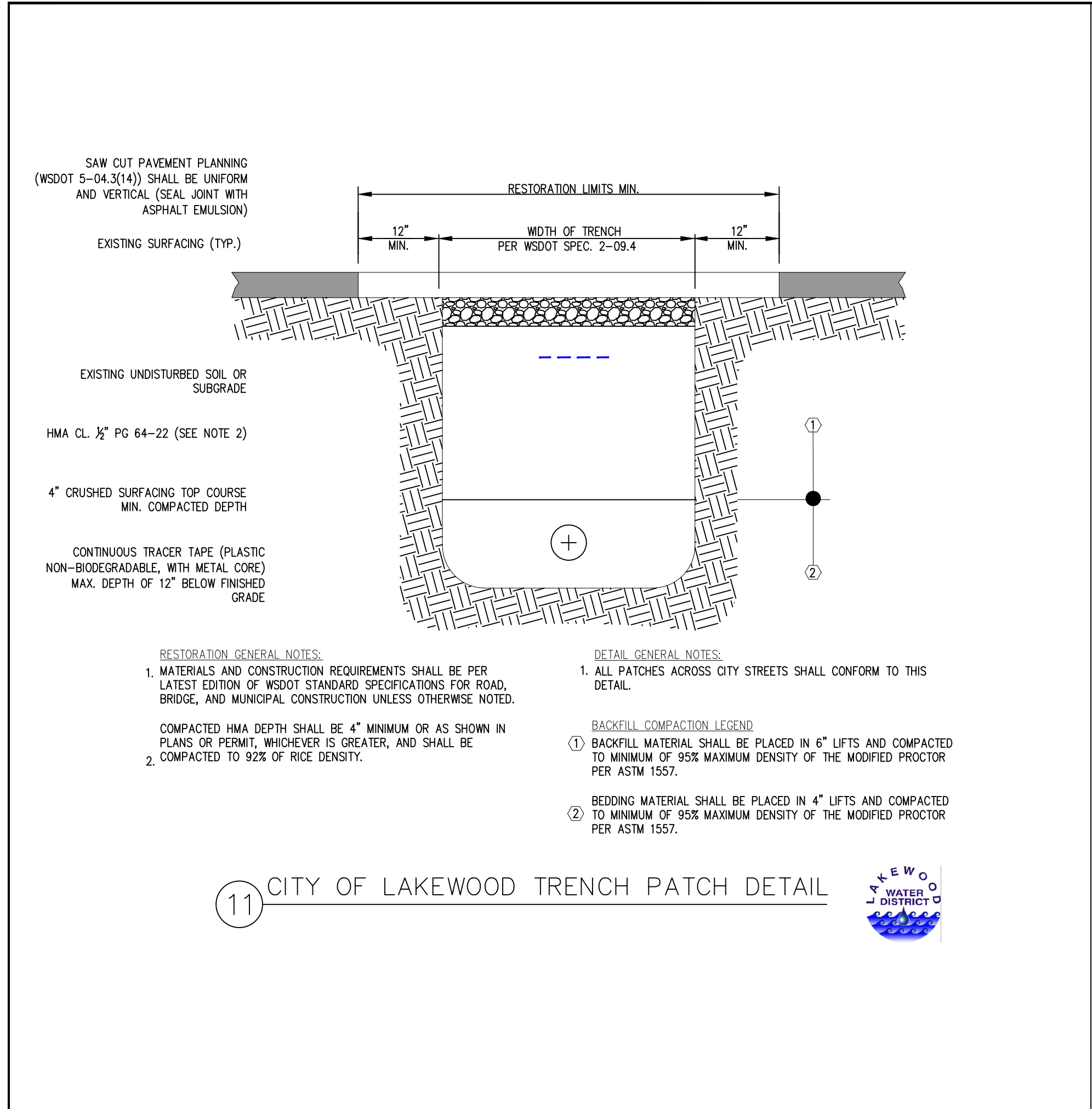
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DRAWING IS FULL SCALE WHEN BAR MEASURES 2'

DWG NO.: C05

SHEET NO.: 05

06



RH2

GEORGE G. DILLARD
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
31196
SIGNED: 01/28/2021

DAVID J. AMERSON
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
27844
SIGNED: 01/28/2021

LAKEWOOD WATER DISTRICT
GRAVELLY LAKE DRIVE
HYDRANT AND METER REPLACEMENT

STANDARD DETAILS

ENGINEER	JMO	DATE	Jan 28, 2021	CLIENT	LAK	LOG NO.	519-154	REVISIONS	NO.	DATE	DESCRIPTION	BY	REVIEW
REVIEWED	DJM	PLOT DATE	Jun 5, 2020	FILE NAME	GRAV-D-DET.DWG								

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DWG NO.: D01

SHEET NO.: 06

06