

City of Muskegon 2024 Road & Utility Construction Project Summary

Project Name: Morton from Lincoln to Denmark

Project Type: Complete reconstruction including new sewers, new water mains, water service lines replaced to the meter, new road, new sidewalks, and new driveways.

Contractor: Jackson Merkey

City Neighborhood(s): Lakeside

Project Summary: The utilities in Morton have reached the end of their life. In order to replace them, the entire street from sidewalk to sidewalk will need to be dug up and replaced. The project includes replacing your water service line all the way to the meter, so the contractor will need to enter your basement (or the area where your water service enters your home). You'll need to allow extra time to get to and from your home this spring and summer, and at times you will need to park on a street that may be a block or two away from your home. Your water will need to be shut off for short periods of time and you will always have notice of when this will happen.

Changes to Expect: The road will look very similar to how it looks today, but everything on the surface and many things underground will be new. Many trees will need to be removed, but they will be replaced in the year following the project.

Timeline/Timeframe: The contractor has the option to build the project at any time during the construction season but is required to complete the work within about 4 months once they start. The project could start as early as March or finish as late as November. Once the contractor has identified a start date, information will be sent to the residents along the project.

Lane, Road or Intersection Shutdown: Morton will be closed for the whole project, only residents will be allowed to enter the construction zone. Side streets may also be closed for most of the project. Denmark will remain open but could be congested.

Contractor Project Update Link: https://www.preinnewhof.com/construction_projects/muskegon-morton-ave/

Project Contact Information:

Todd Myers
Deputy Director of Public Works
Todd.myers@shorelinecity.com
(231) 724-6920

Matt Hulst
Prein & Newhof (Consultant)
Mhulst@preinnewhof.com
(231) 798-0101

FAQs:

How will my trash get picked up? The contractor will work with the City and Republic Waste to make sure your trash is picked up. You may have to bring your trash can to a different location than normal.

Why do all the trees in the streets need to be removed? The sewers and water mains that are being replaced are far underground, in some cases as deep as 12 feet down. In order to safely dig down that far, the trees need to be removed. Replacement trees will be planted the year after the project.

Why does the contractor need to get inside my house? A small portion of your water service pipe (the pipe that brings water into your home) is made of lead. The City is working to replace all water service pipes that have that small piece of lead, and the time has come for your service line to be replaced. The state requires the pipe be replaced all the way to your water meter, which is probably inside your home. The contractor will need to get to your water meter and work in that area as part of the replacement. In the meantime, your water is safe to drink. If you have any questions about this or about lead in your water, reach out to the project contacts listed above.

Cool Info: This project is funded in part by grants from the Bi-Partisan Infrastructure Law

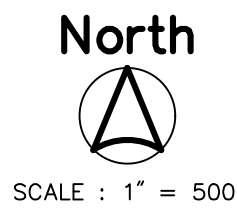
CITY OF MUSKEGON
MUSKEGON COUNTY, MICHIGAN

UTILITY AND STREET IMPROVEMENTS

MORTON AVENUE

SRF PROJECT #5790-01

DWRF PROJECT #7467-01



PROJECT DATUM INFORMATION

COORDINATE SYSTEM : STATE PLANE GRID
 ZONE : MICHIGAN SOUTH 2113
 ELLIPSOID : GRS 80
 HORIZONTAL DATUM : NAD 83 (2011)
 VERTICAL DATUM : NAVD 88
 GEOID : GEOID 18
 UNITS : INTERNATIONAL FEET
 PROJECT COMBINED SCALE FACTOR (PCSF) = 0.999923072227
 GROUND DISTANCE = GRID DISTANCE/PCSF

SOIL BORING GENERAL NOTES

WITHIN EACH SOIL BORING WHERE SHOWN, SOIL SAMPLES WERE OBTAINED BY THE STANDARD PENETRATION TEST METHOD, ASTM D1586, WHEREBY A SPLIT-SPOON SAMPLER IS DRIVEN THREE SUCCESSIVE 6-INCH INCREMENTS WITH A 140 POUND WEIGHT FALLING 30 INCHES. THE NUMBER OF BLOWS REQUIRED TO DRIVE THE SAMPLER FOR EACH INCREMENT IS PRESENTED ON THE SOIL BORING LOGS.

GRANULAR SOILS (COARSE-GRAINED) HAVE MORE THAN 50% OF THEIR DRY WEIGHT RETAINED ON A #20 SEIVE. THEY ARE DESCRIBED AS: BOULDERS, CORRALS, GRAVEL, OR SAND. FINE-GRAINED SOILS HAVE LESS THAN 50% OF THEIR DRY WEIGHT RETAINED ON A #20 SEIVE. THEY ARE DESCRIBED AS: CLAYS OF CLAYEY SILTS IF THEY ARE COHESIVE, AND SILTS IF THEY ARE NON-COHESIVE. IN ADDITION TO GRANULATION, GRANULAR SOILS ARE DEFINED BASED ON THEIR IN-SITU DENSITY. THE GRAINED SOILS ARE FURTHER DEFINED BASED ON THEIR STRENGTH OR CONSISTENCY, AND ON THEIR PLASTICITY.

MAJOR SOIL COMPONENT	GRADATION RANGE	DESCRIPTION TERMS (OF MAJOR SOIL CONSTITUENTS)	PERCENT OF DRY WEIGHT
BOULDERS	OVER 12 INCHES (305mm)	GRAZE	1 - 10
CORRALS	12 INCHES TO 3 INCHES (305mm TO 76mm)	LITTLE	10 - 20
GRAVEL	COARSE 3 INCHES TO 3/4 INCHES (76mm TO 19mm)	SOME	20 - 35
	FINE 3/4 INCHES TO #4 SEIVE (19mm TO 4.75mm)	AND	35 - 50
SAND	COARSE #4 SEIVE TO #10 SEIVE (4.75mm TO 2.00mm)		
	MEDIUM #10 SEIVE TO #40 SEIVE (2.00mm TO 0.425mm)		
	FINE #40 SEIVE TO #200 SEIVE (0.425mm TO 0.075mm)		
SILT	PASSING #200 SEIVE (0.075mm) TO 0.0075mm		
CLAY	SMALLER THAN 0.0075mm		

CONSISTENCY OF COHESIVE SOILS:

UNCOMPACTED COMP. STRENGTH, q_u (kPa)	CONSISTENCY
<0.25	VERY SOFT
0.25 - 0.50	SOFT
0.50 - 1.00	MEDIUM (FIRM)
1.00 - 2.00	STIFF
2.00 - 4.00	VERY STIFF
4.00 - 8.00	HARD
>8.00	VERY HARD

IN-SITU DENSITY OF GRANULAR SOILS:

N - BLOWS/FT.	IN-SITU DENSITY
0 - 4	VERY LOOSE
5 - 10	LOOSE
11 - 30	MEDIUM DENSE
31 - 50	DENSE
50 +	VERY DENSE

WATER LEVELS INDICATED ON THE BORING LOGS ARE THE LEVELS MEASURED IN THE BORING AT THE TIMES INDICATED. IT SHOULD BE NOTED THAT GROUNDWATER LEVELS OBSERVED DURING DRILLING IN PREVIOUSLY COHESIVE SOILS ARE NOT NECESSARILY INDICATIVE OF THE STABLE GROUNDWATER LEVEL. THIS IS DUE TO THE RELATIVELY LOW PERMEABILITY OF CLAY SOILS AND THE TENDENCY OF DRILLING OPERATIONS TO TEMPORARILY SEAL OFF NATURAL PATHS OF GROUNDWATER MIGRATION INTO THE BORING. ADDITIONALLY, FLUCTUATIONS IN GROUNDWATER LEVELS SHOULD BE ANTICIPATED WITH SEASONAL VARIATIONS AND FOLLOWING PERIODS OF HEAVY OR PROLONGED PRECIPITATION.

THE SOIL BORING LOGS SHOWN ON THE CONSTRUCTION PLANS ARE BEING FURNISHED FOR YOUR CONVENIENCE AND GENERAL INFORMATION ONLY. THE DATA SHOWN ON THE BORING LOGS REPRESENTS SOIL AND GROUNDWATER CONDITIONS ENCOUNTERED AT THE RESPECTIVE BORING LOCATIONS. VARIATIONS MAY OCCUR BETWEEN THESE LOCATIONS. ADDITIONALLY, THE STRATIGRAPHIC LINES REPRESENT THE APPROXIMATE BOUNDARIES BETWEEN SOIL TYPES. HOWEVER, THE TRANSITION MAY BE MORE GRADUAL THAN WHAT IS SHOWN. THE BIDDER WILL BE RESPONSIBLE FOR MAKING THEMSELVES FAMILIAR WITH SUBSURFACE CONDITIONS BY WHATEVER MEANS THEY DEEM NECESSARY AND SHALL MAKE THEIR OWN DETERMINATIONS THEREFROM.

THE BIDDER BY SUBMITTING A BID, WAIVES ALL CLAIMS FOR DAMAGES WHICH THEY MAY SUFFER BY REASONS OF THE INADEQUACIES OR DISCREPANCIES OF THE INFORMATION SHOWN ON THESE SOIL BORING LOGS AND UNDERSTANDS THAT NO COMPENSATION WILL BE PAID TO THEM DUE TO AN INADEQUACY OR DISCREPANCY IN THIS DATA.

GENERAL NOTES

- CONTRACTOR TO CALL MISS DIG (CALL TOLL FREE 1-800-482-7171) THREE WORKING DAYS BEFORE STARTING YOUR PROJECT. (EXCLUDING WEEKENDS AND HOLIDAYS)
- CONTRACTOR SHALL PRESERVE ALL GOVERNMENT AND PROPERTY CORNERS.

SOIL EROSION CONTROL NOTES

EROSION CONTROL BLANKET -
 SOIL EROSION CONTROL BLANKET SHALL BE REPLACED ON ALL DISTURBED SLOPES THAT ARE 1 ON 3 OR STEEPER AND IN ALL DISTURBED DITCH BOTTOMS.

TEMPORARY SEEDING -
 TEMPORARY SEEDING SHALL BE CAST ON ALL DISTURBED AREAS AS DIRECTED BY THE ENGINEER WITHIN 1 WEEK OF DISTURBANCE.

UTILITIES

ELECTRIC-DISTRIBUTION

CONSUMERS ENERGY
 700 E. STERNBERG RD.
 MUSKEGON, MI 49441
 PHONE : (231) 332-2682
 ATTN: JOEL BROWN
 JOEL.M.BROWN@CSEENERGY.COM

GAS

DTE ENERGY
 2359 CLYDOP DR.
 MUSKEGON, MI 49444
 PHONE : (231) 726-0943
 ATTN: ANTHONY FERRIER
 ANTHONY.FERRIER@DTEENERGY.COM

WATER & SANITARY

CITY OF MUSKEGON
 1350 E. KEATING AVE.
 MUSKEGON, MI 49442
 PHONE : (231) 724-4184
 ATTN: DAVE BAKER
 DAVE.BAKER@SHORELINECITY.COM

STORM SEWER

CITY OF MUSKEGON
 1350 E. KEATING AVE.
 MUSKEGON, MI 49442
 PHONE : (231) 724-6992
 ATTN: VERNON BERNDT
 VERN.BERNDT@SHORELINECITY.COM

COMMUNICATION

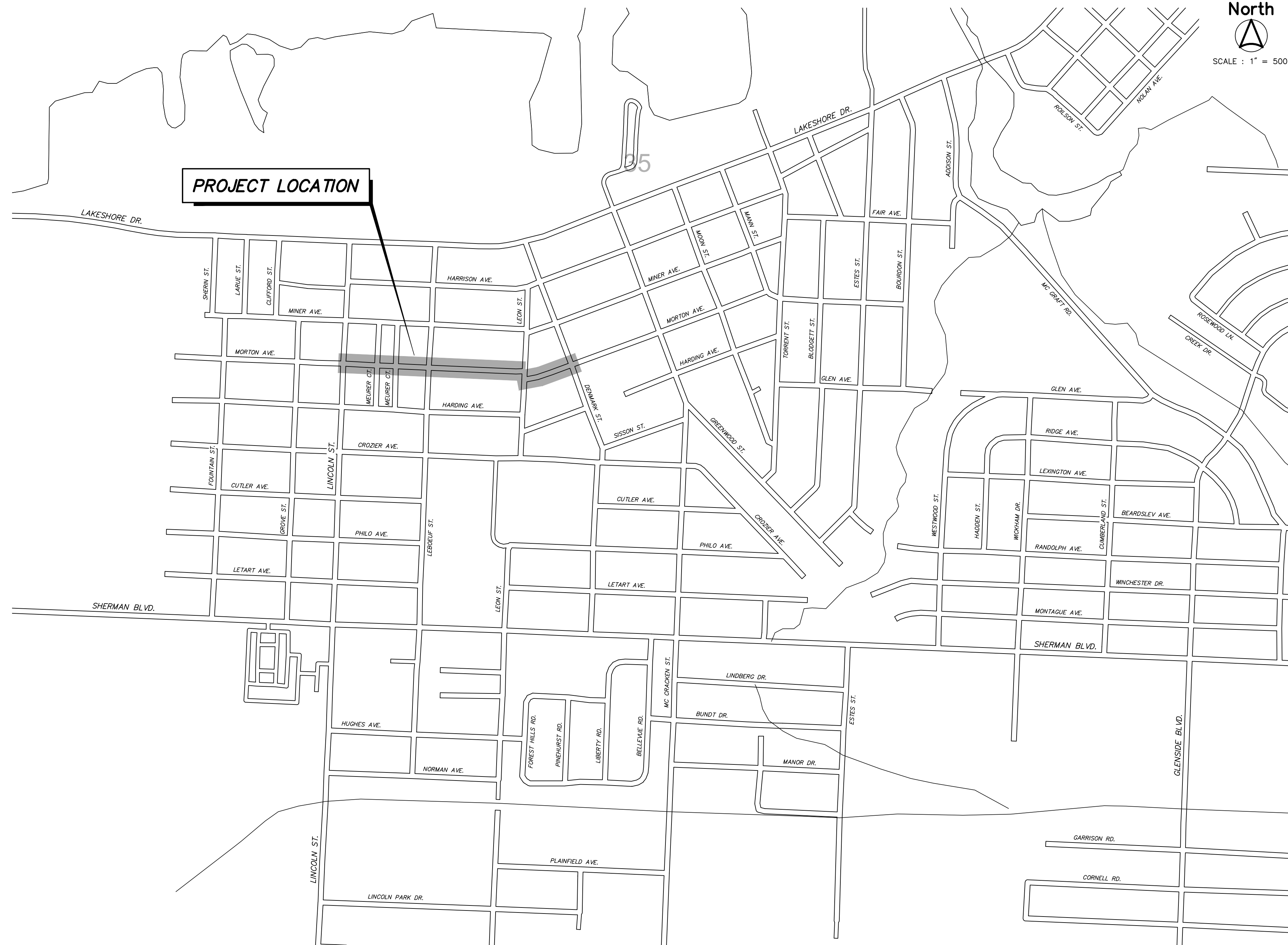
FRONTIER COMMUNICATIONS
 960 TERRACE ST.
 MUSKEGON, MI 49443
 PHONE : (231) 727-1134
 ATTN: CINDY WHITEMAN
 CINDY.WHITEMAN@FTR.COM

CABLE TELEVISION

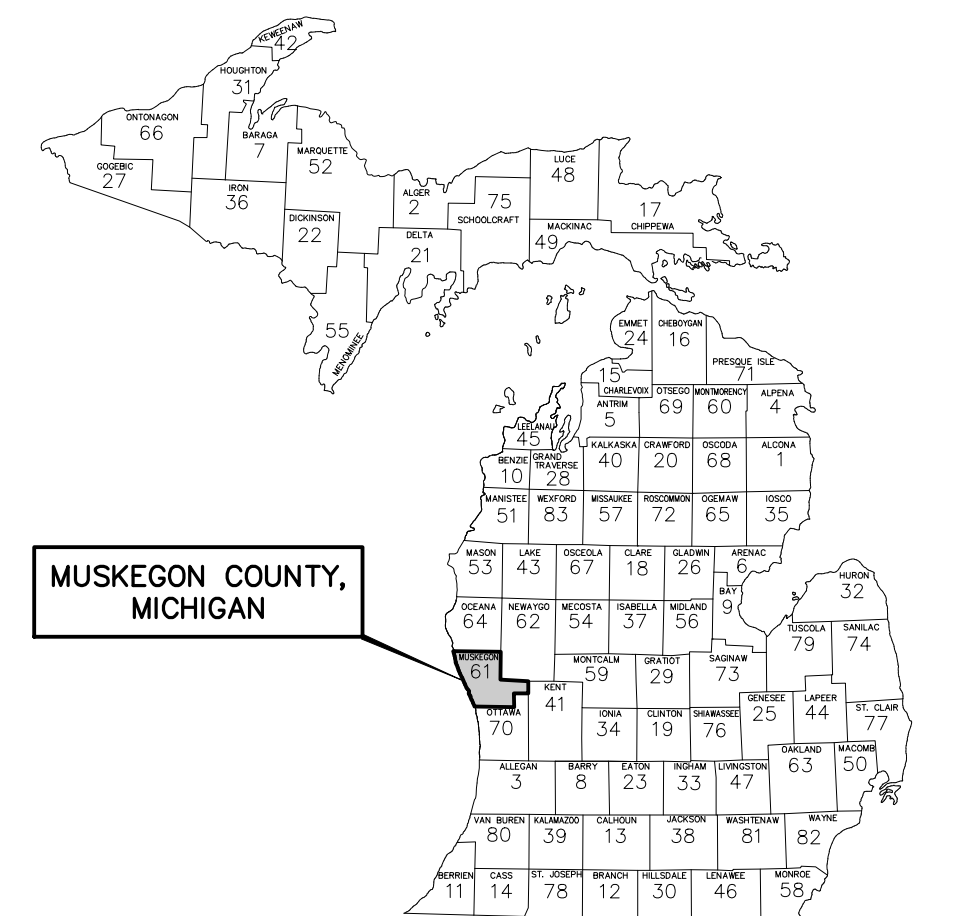
COMCAST
 700 W. BROADWAY
 MUSKEGON, MI 49441
 PHONE: (231) 375-5112
 ATTN: JON CHARLAND
 JONATHAN_CHARLAND@COMCAST.COM



UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

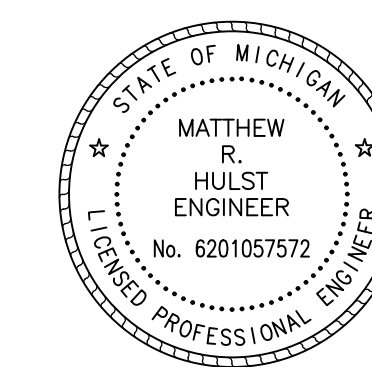


STATE LOCATION MAP



SHEET INDEX

SHEET No.	DESCRIPTION
1	COVER SHEET
2	TYPICAL CROSS SECTIONS AND DETAILS
3	REMOVAL PLAN (STA. 10+00 TO STA. 18+00)
4	REMOVAL PLAN (STA. 18+00 TO STA. 25+00)
5	REMOVAL PLAN (STA. 40+00 TO STA. 46+00)
6	UTILITY IMPROVEMENTS (STA. 10+00 TO STA. 18+00)
7	UTILITY IMPROVEMENTS (STA. 18+00 TO STA. 25+00)
8	UTILITY IMPROVEMENTS (STA. 40+00 TO STA. 46+00)
9	STREET IMPROVEMENTS (STA. 10+00 TO STA. 18+00)
10	STREET IMPROVEMENTS (STA. 18+00 TO STA. 25+00)
11	STREET IMPROVEMENTS (STA. 40+00 TO STA. 46+00)
12	GRADING DETAILS
13	GRADING DETAILS
14	SIDEWALK GRADING DETAILS
15	SIDEWALK GRADING DETAILS



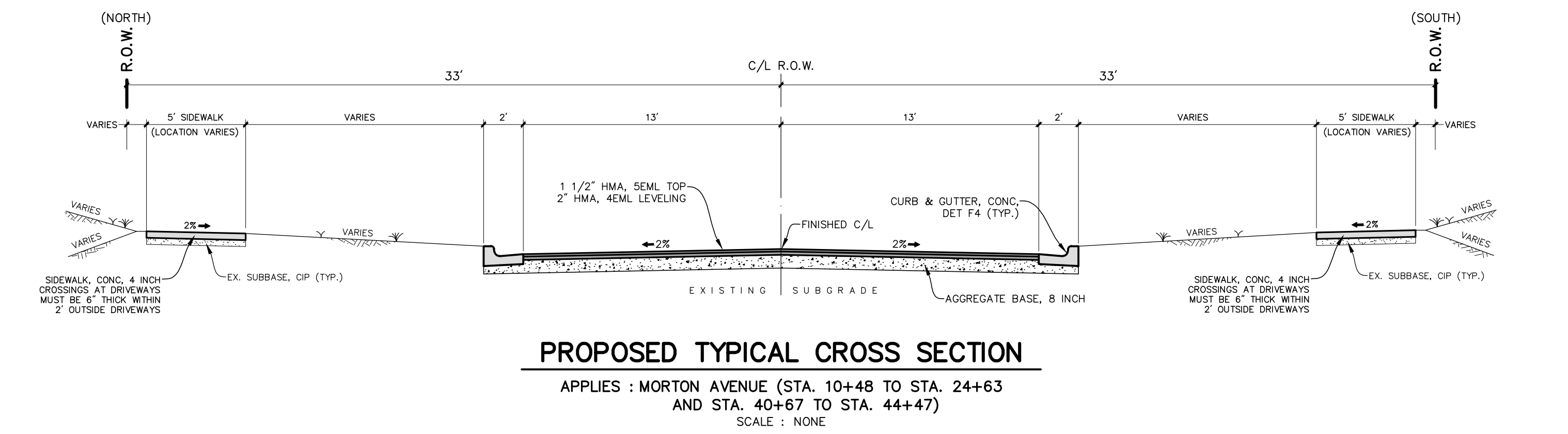
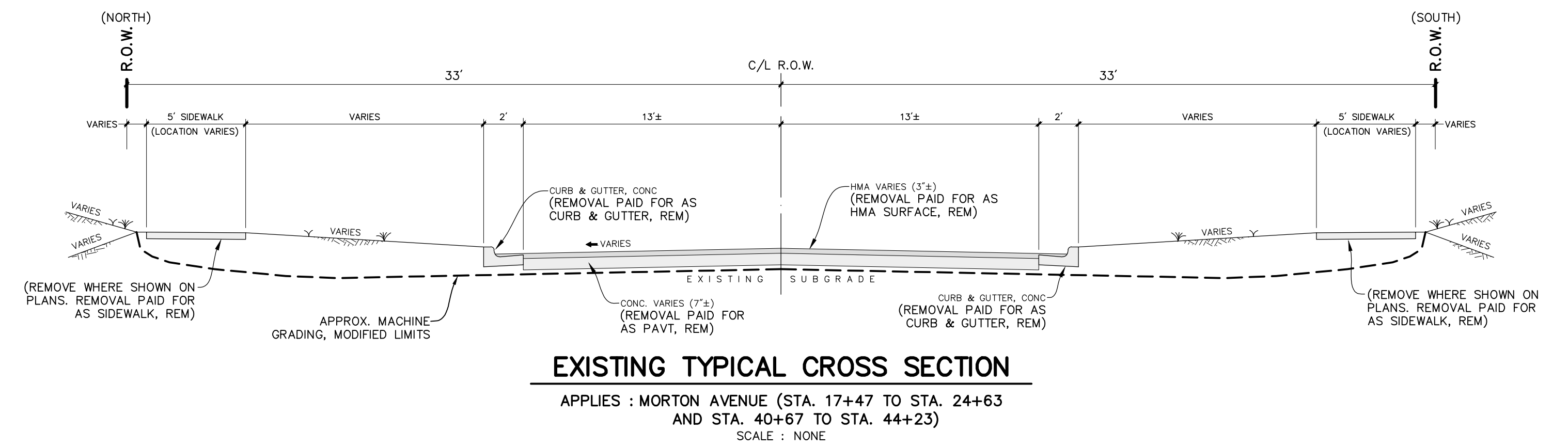
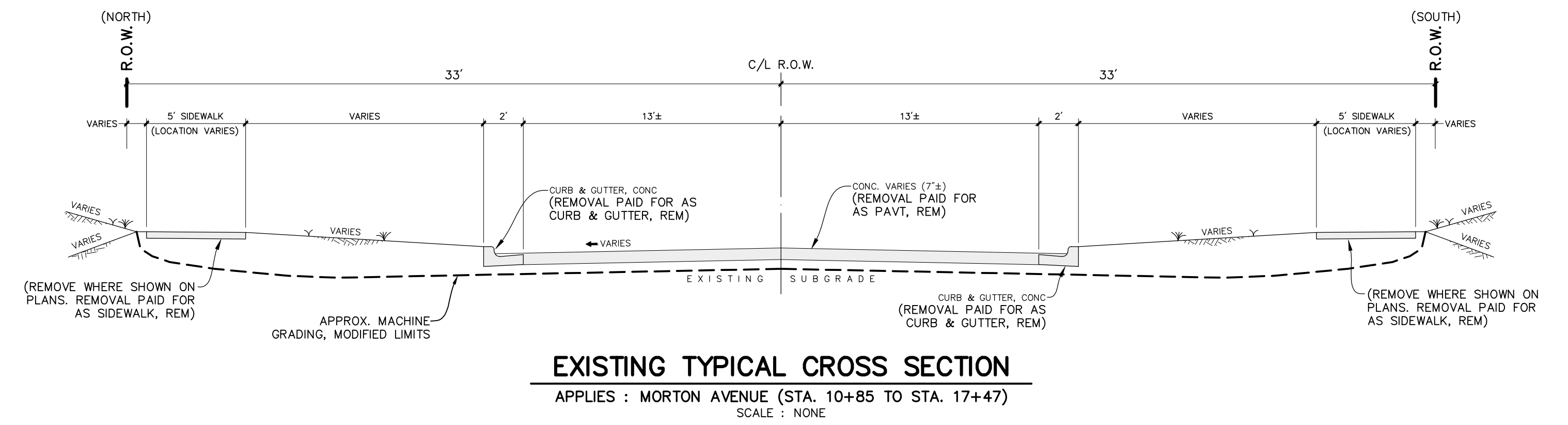
Prein & Newhof
 Engineers • Surveyors • Environmental • Laboratory

PROJECT NO.
2221072

SHEET NO.

1 OF 15

I:\QA\30 PROJECTS\2023\221072_MUSKEGON - SMITH - May, 24, 2023 - 07:24am - Prein&Newhof



HOT MIX ASPHALT APPLICATION TABLE

IDENT. #	PAY ITEM	MIXTURE	APPLICATION RATE	PERFORMANCE GRADE BINDER	REMARKS
HMA, 4EML	HMA, 4EML	HMA, 4EML	220 LBS/SYD	PG 64-28	MORTON AVENUE LEVELING
HMA, 5EML	HMA, 5EML	HMA, 5EML	165 LBS/SYD	PG 64-28	MORTON AVENUE TOP

NOTES:

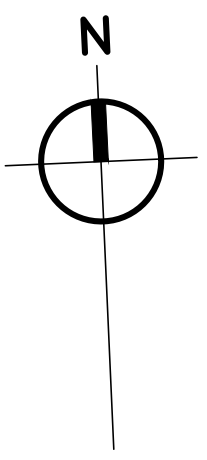
- HMA BOND COAT (MDOT SS-1h) SHALL BE APPLIED @ 0.05-0.15 GAL/SYD BETWEEN HMA LIFTS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE HMA ITEMS. HMA BOND COAT SHALL ALSO BE APPLIED TO THE VERTICAL EDGE OF THE ADJACENT HMA PAVEMENT AND/OR CONCRETE CURB & GUTTER.

NO.	REVISIONS	BY	DATE	DRAWN
				J.J.S.
				DATE: FEB. '23
				CHECKED: M.R.H.
				DATE: APR. '23

Prein & Newhof
 Engineers • Surveyors • Environmental • Laboratory

CITY OF MUSKEGON
 MUSKEGON COUNTY, MICHIGAN
 STREET IMPROVEMENTS
 TYPICAL CROSS SECTIONS & DETAILS

PROJECT NO.
2221072
 SHEET NO.
2 OF 15



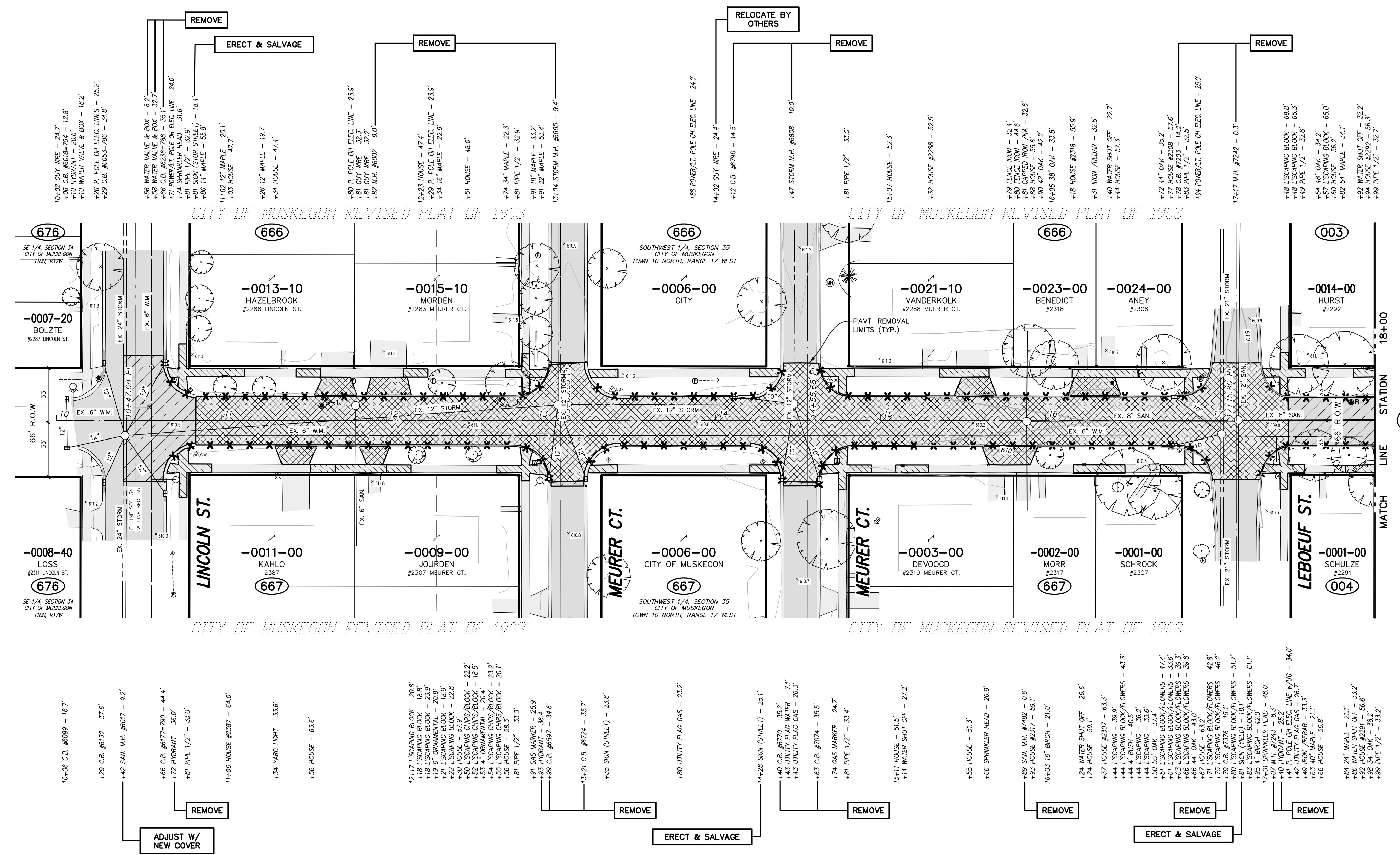
B.M. EL. 612.51
MORTON AVENUE AND LINCOLN STREET,
20' ± W & 25' ± N OF C/L, 1/4" SET 600
NAIL SE SIDE P. POLE (1.8' A/GROUND)

B.M. EL. 612.31
MORTON AVENUE & EAST MEURER COURT,
45' ± E & 60' ± S OF C/L, 1/4" SET 600
#2310 NW CORNER TOP BOTTOM CONC.
STEP ON WEST SIDE HOUSE
(0.7' A/GROUND)

B.M. EL. 611.96
MORTON AVENUE AND LEBOEUF STREET,
20' ± W & 25' ± N OF C/L, 1/4" SET 600
NAIL SOUTH SIDE P. POLE
(2.0' A/GROUND)

CONTROL POINT TABLE

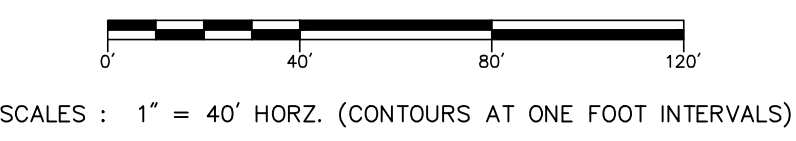
POINT No.	NORTHING	EASTING	ELEVATION
805	629626.673	1267953.350	610.07
806	629643.789	1267922.890	610.83
807	629644.105	12679493.870	611.46
808	629615.658	12679236.920	611.26



REMOVAL LEGEND

	REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
	REMOVE CONCRETE PAVEMENT, CONCRETE DRIVEWAY, PAID FOR AS: PAVT, REM
	REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
	REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM

MORTON AVENUE
(66' RIGHT OF WAY WIDTH 29' CONCRETE PAVEMENT WIDTH w/CURB & GUTTER)



NO.	REVISIONS	BY	DATE
		J.J.S.	
		FEB. '23	
		M.R.H.	
		APR. '23	

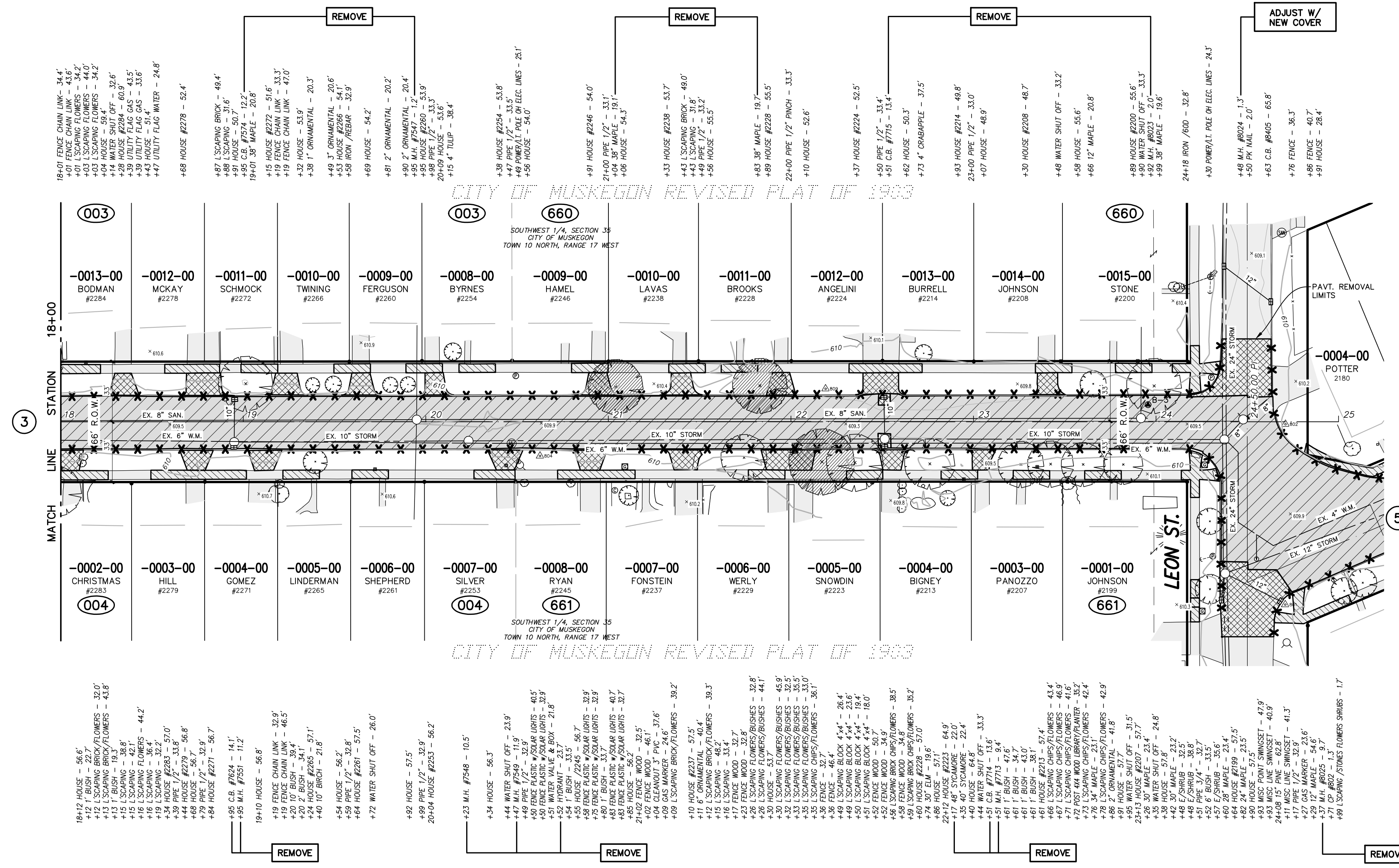
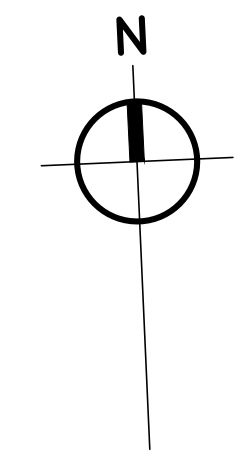
Prein & Newhof
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CITY OF MUSKEGON
MUSKEGON COUNTY, MICHIGAN
REMOVAL PLAN
MORTON AVENUE

PROJECT NO.
2221072
SHEET NO.
3 OF 15

B.M. EL. 611.03
MORTON AVENUE AND LEON STREET, 80±
N & 20± W OF C/L "X", FOUND 600 NAIL
EAST SIDE P. POLE (O.G. A/GROUND)

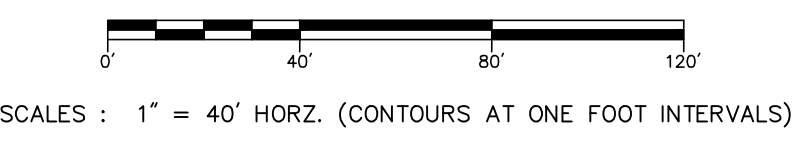
CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
801	629474.646	1260817.950	609.69
802	629573.398	1260822.490	612.44
804	629574.227	1260813.790	610.33
809	629654.012	1260837.700	609.90



REMOVAL LEGEND

- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
- REMOVE CONCRETE PAVEMENT, CONCRETE DRIVEWAY, PAID FOR AS: PAVT, REM
- REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
- REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM

MORTON AVENUE
(66' RIGHT OF WAY WIDTH 29' ASPHALT PAVEMENT WIDTH w/CURB & GUTTER)



NO.	REVISIONS	BY	DATE

DRAWN: J.J.S.
 DATE: FEB. '23
 CHECKED: M.R.H.
 DATE: APR. '23

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CITY OF MUSKEGON
 MUSKEGON COUNTY, MICHIGAN
 REMOVAL PLAN
 MORTON AVENUE

PROJECT NO.
2221072
 SHEET NO.
4 OF 15

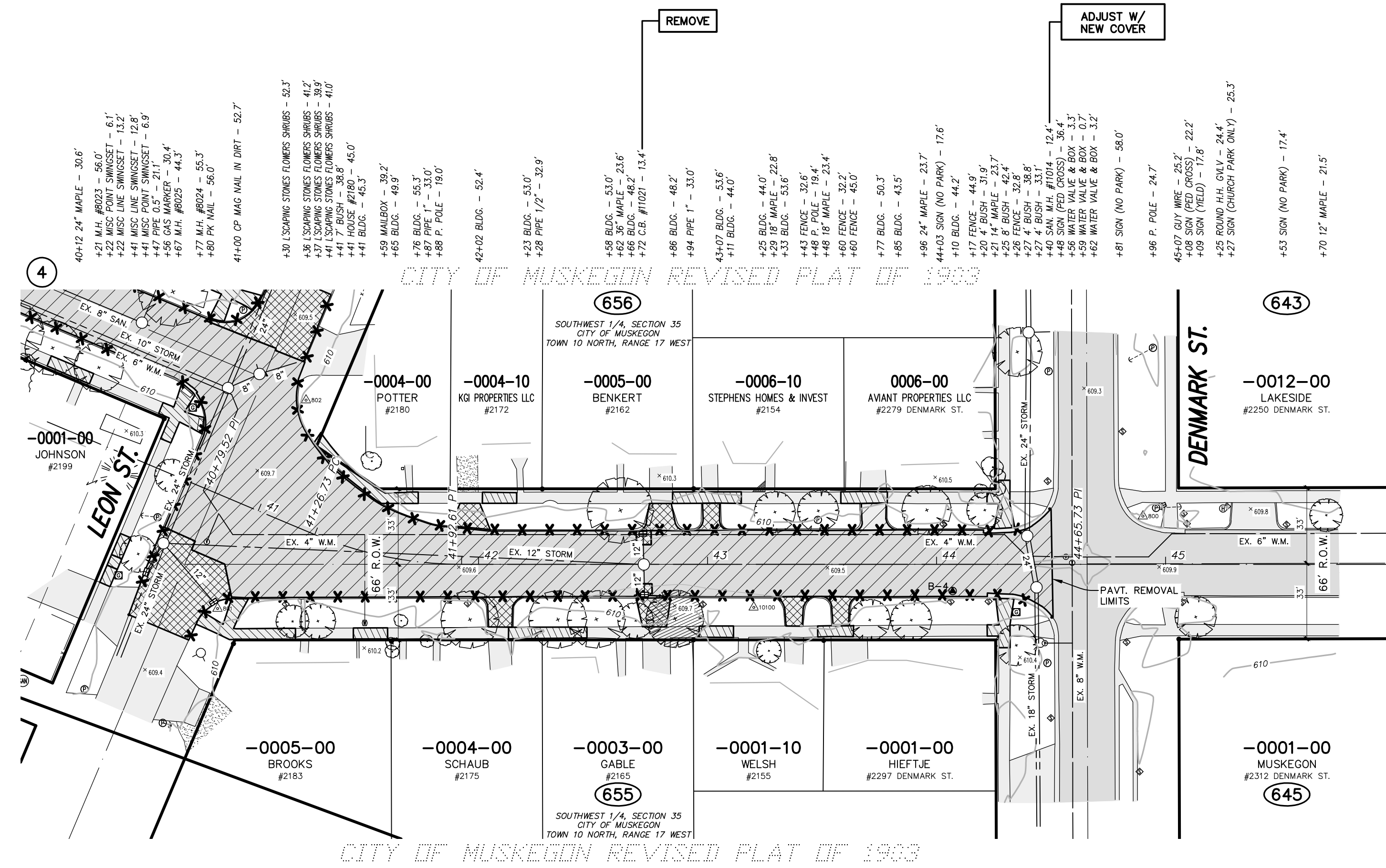
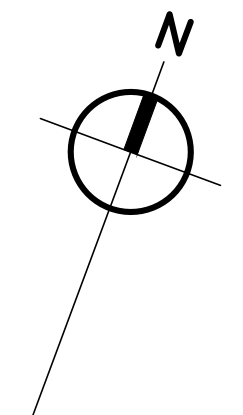
T:\CADD\PROJECTS\2023\2221072_MUSKEGON_2023.DWG - SOUTH - May, 24, 2023 - 07:24am - FredMeech@d

811
Know what's below.
Call before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

B.M. EL. 611.43
 MORTON AVENUE & DENMARK STREET,
 30 ± E & 25 ± N OF C/L X, BENCH ME
 N SE SIDE P. POLE (1.0 A/GROUND)

POINT No.	NORTHING	EASTING	ELEVATION
800	629652.952	1260892.700	610.09
801	629414.646	1260881.200	609.69
802	629573.388	1260882.490	610.44
10100	629556.535	1260883.260	610.08



REMOVAL LEGEND

- REMOVE HMA SURFACE, PAID FOR AS: HMA SURFACE, REM
- REMOVE CONCRETE PAVEMENT, CONCRETE DRIVEWAY, PAID FOR AS: PAVT, REM
- REMOVE CONCRETE SIDEWALK PAID FOR AS: SIDEWALK, REM
- REMOVE CURB, GUTTER OR CURB AND GUTTER, PAID FOR AS: CURB AND GUTTER, REM

MORTON AVENUE
 (66' RIGHT OF WAY WIDTH 29' ASPHALT PAVEMENT WIDTH W/CURB & CUTTER)



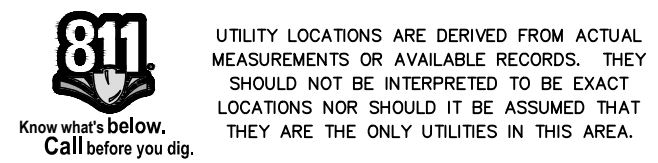
NO.	REVISIONS	BY	DATE

NO.	DATE	BY
1	FEB. '23	J.J.S.
2		
3		
4	APR. '23	M.R.H.

CITY OF MUSKEGON
 MUSKEGON COUNTY, MICHIGAN
REMOVAL PLAN
MORTON AVENUE

PROJECT NO.
2221072
 SHEET NO.
5 OF 15

T:\CADD\PROJECTS\2023\2221072_MUSKEGON_2023\DWG\2221072_DENK MORTON EASTING - SOUTH - May, 24, 2023 - 07:55am - Prein&Newhof



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B.M. EL. 612.51
MORTON AVENUE AND LINCOLN STREET,
20' ± W & 25' ± N OF C/L, 7' ± SET 600
NAIL SIDE P. POLE (1.8' A/GROUND)

B.M. EL. 612.31
MORTON AVENUE AND EAST MEURER COURT,
45' ± E & 60' ± S OF C/L, 7' ± SET 600
#2310 NW CORNER TOP BOTTOM CONC.
STEP ON WEST SIDE HOUSE (0.7' A/GROUND)

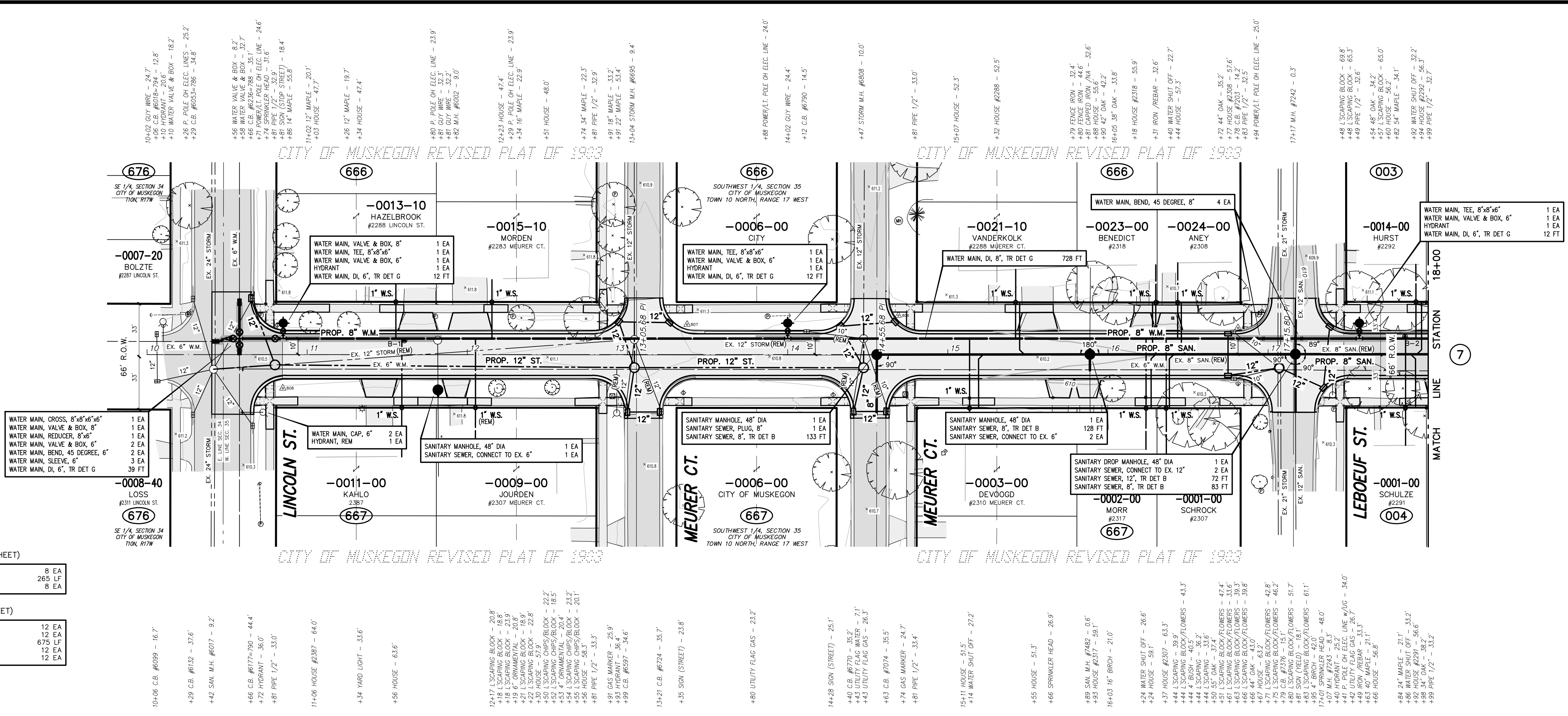
B.M. EL. 611.96
MORTON AVENUE AND LEBOUF STREET,
20' ± W & 25' ± N OF C/L, 7' ± SET 600
NAIL SOUTH SIDE P. POLE (2.0' A/GROUND)

POINT No.	NORTHING	EASTING	ELEVATION
805	629626.673	1260783.350	610.07
806	629643.799	12607822.890	610.83
807	629644.105	12607490.870	611.46
808	629615.658	12607236.920	611.26

ITEM	QUANTITY
WATER MAIN, CROSS, 8" x 16" x 6"	1 EA
WATER MAIN, VALVE & BOX, 6"	1 EA
WATER MAIN, REDUCER, 8" x 6"	1 EA
WATER MAIN, VALVE & BOX, 6"	2 EA
WATER MAIN, BEND, 45 DEGREE, 6"	2 EA
WATER MAIN, SLEEVE, 6"	3 EA
WATER MAIN, DL, 6", TR DET G	39 FT

SANITARY SEWER, WYE, 8 INCH x 6 INCH	8 EA
SANITARY LATERAL, 6 INCH	265 LF
SANITARY LATERAL, CONNECTION TO EX.	8 EA

WATER SERVICE, CORPORATION STOP, 1 INCH	12 EA
WATER SERVICE, CURB STOP AND BOX, 1 INCH	12 EA
WATER SERVICE, 1 INCH	675 LF
WATER SERVICE, CONNECTION TO EX.	12 EA
WATER SERVICE, RESTORATION, PRIVATE	12 EA



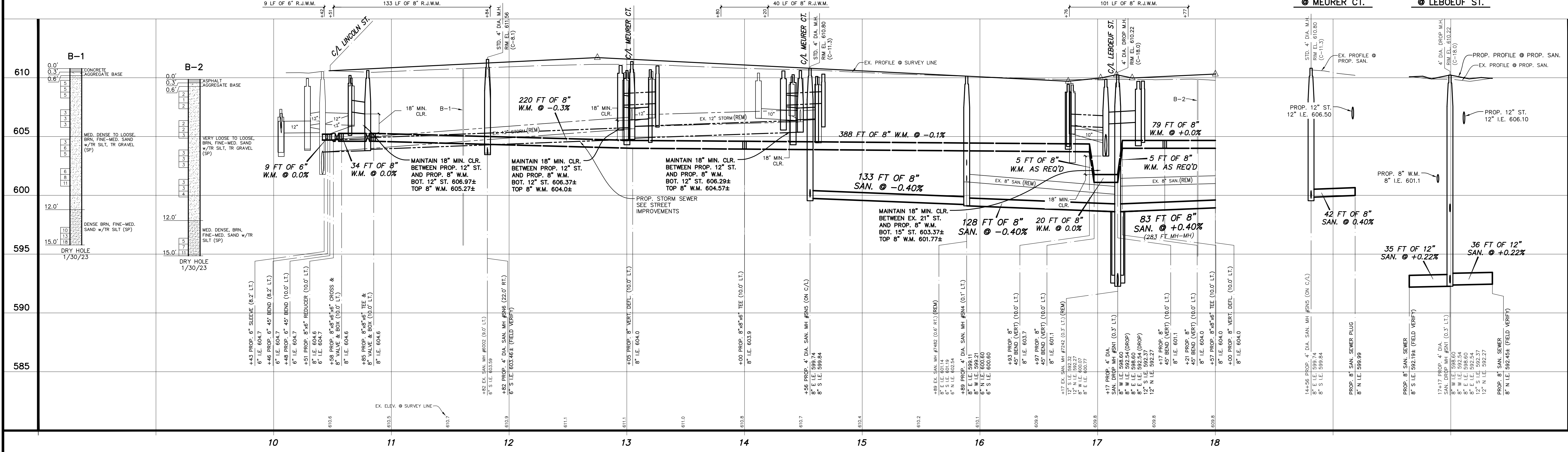
TOPOGRAPHY TEXT NOTE
TOPOGRAPHY TEXT SHOWN FOR INFORMATION ONLY. SEE REMOVAL PLANS FOR ACTION ITEMS.

- WATER MAIN CONSTRUCTION NOTES**
- CONTRACTOR MUST PROVIDE A MINIMUM OF 18" VERTICAL CLEARANCE AND 10' HORIZONTAL CLEARANCE BETWEEN PROPOSED WATER MAIN, AND STORM AND SANITARY SEWERS.
 - USE HYDRANT EXTENSIONS OR VERTICAL BENDS ON HYDRANT LEADS TO ENSURE HYDRANT BREAKAWAY FLANGE IS 5'-1/2" FROM FINISHED GRADE. COST SHALL BE INCLUDED IN THE HYDRANT PAY ITEM.
 - SHADED WATER MAIN INDICATES RESTRAINED JOINT WATER MAIN.
 - ALL HYDRANTS MUST BE RESTRAINED TO THE TEE.

- WATER SERVICE CONSTRUCTION NOTES**
- WATER SERVICES SHOWN ON THE PLANS ARE LOCATED BASED ON RECORDS. ACTUAL LOCATION MAY BE DIFFERENT THAN SHOWN. ALIGNMENT OF EXISTING WATER SERVICES FROM THE CURB STOP BOX TO THE HOUSE IS UNKNOWN AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO REPLACEMENT.
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 - IF THE WATER SERVICE METER IS LOCATED IN A PIT OUTSIDE THE HOUSE, THE CONTRACTOR SHALL ATTEMPT TO RELOCATE THE METER INTO THE RESIDENCE. RELOCATION MUST BE COORDINATED WITH THE CITY AND THE PROPERTY OWNER.
 - CONTRACTOR TO COORDINATE WITH THE CITY FOR METER REMOVAL AND REINSTALLATION.

- SANITARY SEWER CONSTRUCTION NOTES**
- ALIGNMENT & LOCATION OF EXISTING SANITARY SEWER LATERALS ARE FROM AVAILABLE RECORDS. EXACT LOCATION IS UNKNOWN. CONTRACTOR TO FIELD VERIFY LOCATION OF SANITARY LATERALS PRIOR TO INSTALLATION OF WYES.
 - SANITARY SEWER LATERALS SHALL BE REPLACED TO THE PROPERTY LINE AND CONNECTED TO THE EXISTING LATERAL.

MORTON AVENUE
(66' RIGHT OF WAY WIDTH 29' CONCRETE PAVEMENT WIDTH w/CURB & GUTTER)



UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

SCALES: 1" = 40' HORZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 4' VERT.

NO.	REVISIONS	BY	DATE

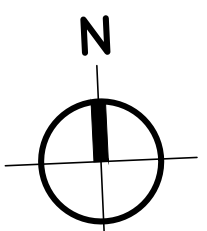
Prein & Newhof
Engineers • Surveyors • Environmental • Laboratory

CITY OF MUSKEGON
MUSKEGON COUNTY, MICHIGAN
UTILITY IMPROVEMENTS
MORTON AVENUE

PROJECT NO.
2221072
SHEET NO.
6 OF 15

B.M. EL. 611.03
MORTON AVENUE AND LEON STREET, 80±
N & 20± W OF C/L "X", FOUND 600 NAIL
EAST SIDE P. POLE (O.G. A/GROUND)

CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	ELEVATION
801	629474.646	1260817.950	609.69
802	629513.398	1260822.490	612.44
804	629574.227	1260815.790	610.33
809	629654.012	1260837.700	609.90



TOPOGRAPHY TEXT NOTE

TOPOGRAPHY TEXT SHOWN FOR INFORMATION ONLY. SEE REMOVAL PLANS FOR ACTION ITEMS.

SANITARY LATERAL TOTALS (THIS SHEET)

SANITARY SEWER, WYE, 8" INCH x 6 INCH	26 EA
SANITARY LATERAL, 6 INCH	860 LF
SANITARY LATERAL, CONNECTION TO EX.	23 EA

WATER SERVICE TOTALS (THIS SHEET)

WATER SERVICE, CORPORATION STOP, 1 INCH	26 EA
WATER SERVICE, CURB STOP AND BOX, 1 INCH	26 EA
WATER SERVICE, 1 INCH	1,450 LF
WATER SERVICE, CONNECTION TO EX.	26 EA
WATER SERVICE, RESTORATION, PRIVATE	26 EA

WATER MAIN CONSTRUCTION NOTES

- CONTRACTOR MUST PROVIDE A MINIMUM OF 18" VERTICAL CLEARANCE AND 10' HORIZONTAL CLEARANCE BETWEEN PROPOSED WATER MAIN, AND STORM AND SANITARY SEWERS.
- USE HYDRANT EXTENSIONS OR VERTICAL BENDS ON HYDRANT LEADS TO ENSURE HYDRANT BREAKAWAY FLANGE IS 3"± FROM FINISHED GRADE. COST SHALL BE INCLUDED IN THE HYDRANT PAY ITEM.
- SHADED WATER MAIN INDICATES RESTRAINED JOINT WATER MAIN.
- ALL HYDRANTS MUST BE RESTRAINED TO THE TEE.

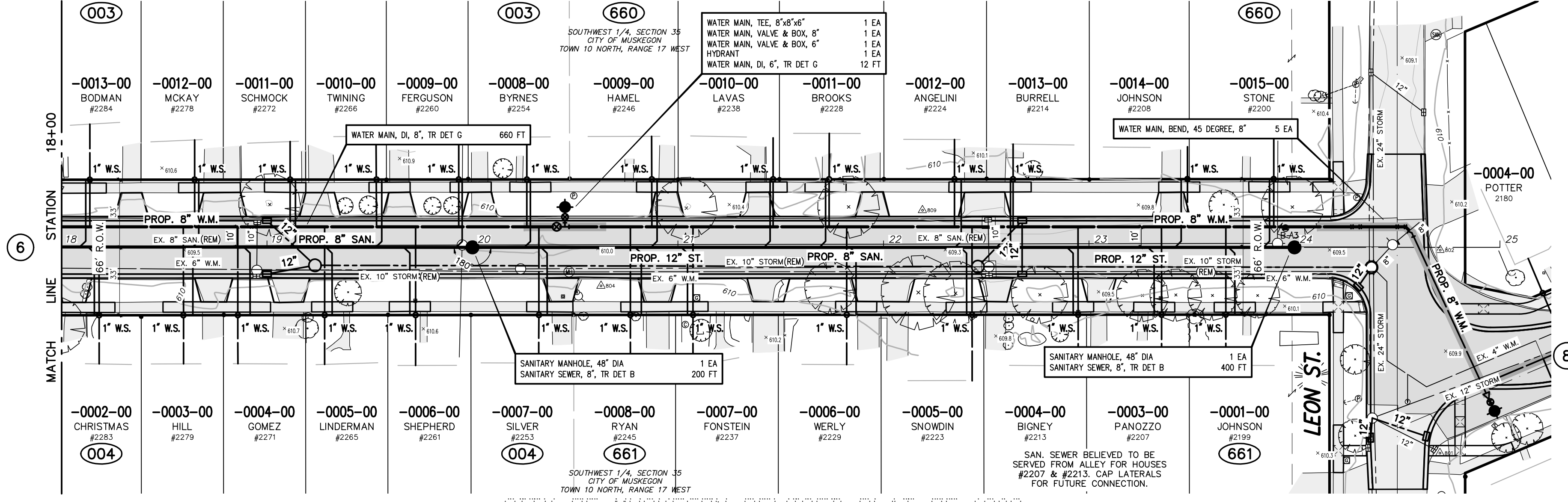
WATER SERVICE CONSTRUCTION NOTES

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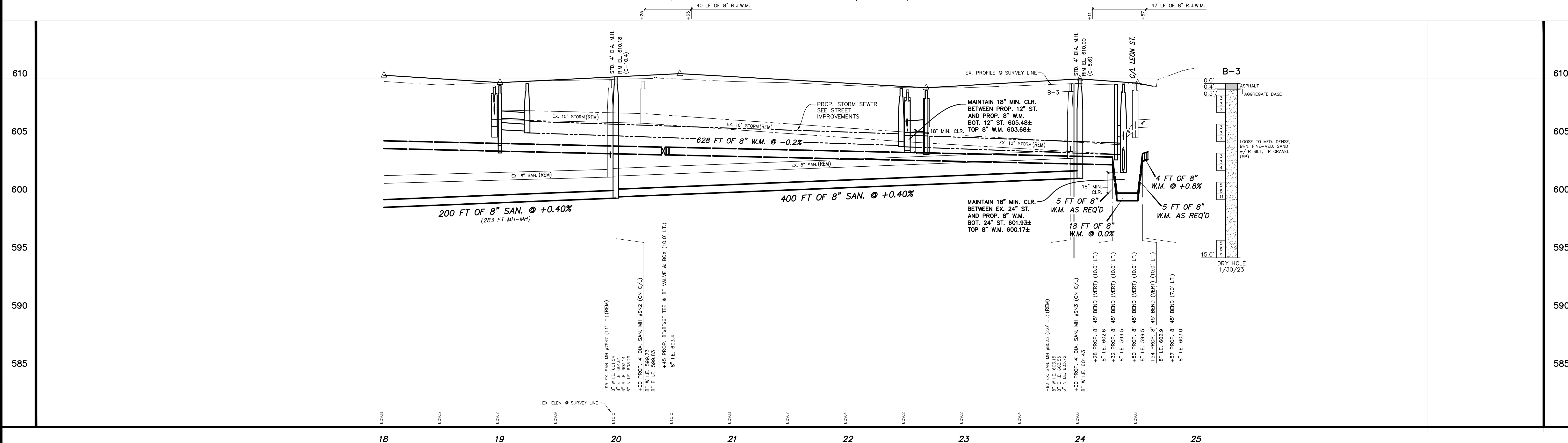
CITY OF MUSKEGON REVISED PLAT OF 1903



CITY OF MUSKEGON REVISED PLAT OF 1903

MORTON AVENUE

(66' RIGHT OF WAY WIDTH 29' ASPHALT PAVEMENT WIDTH w/CURB & GUTTER)



811
UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.
Call before you dig.

NO. REVISIONS BY DATE DRAWN J.J.S. DATE FEB. '23 CHECKED M.R.H. DATE APR. '23

SCALES : 1" = 40' HORIZ. (CONTOURS AT ONE FOOT INTERVALS)
1" = 4' VERT.

Prein & Newhof
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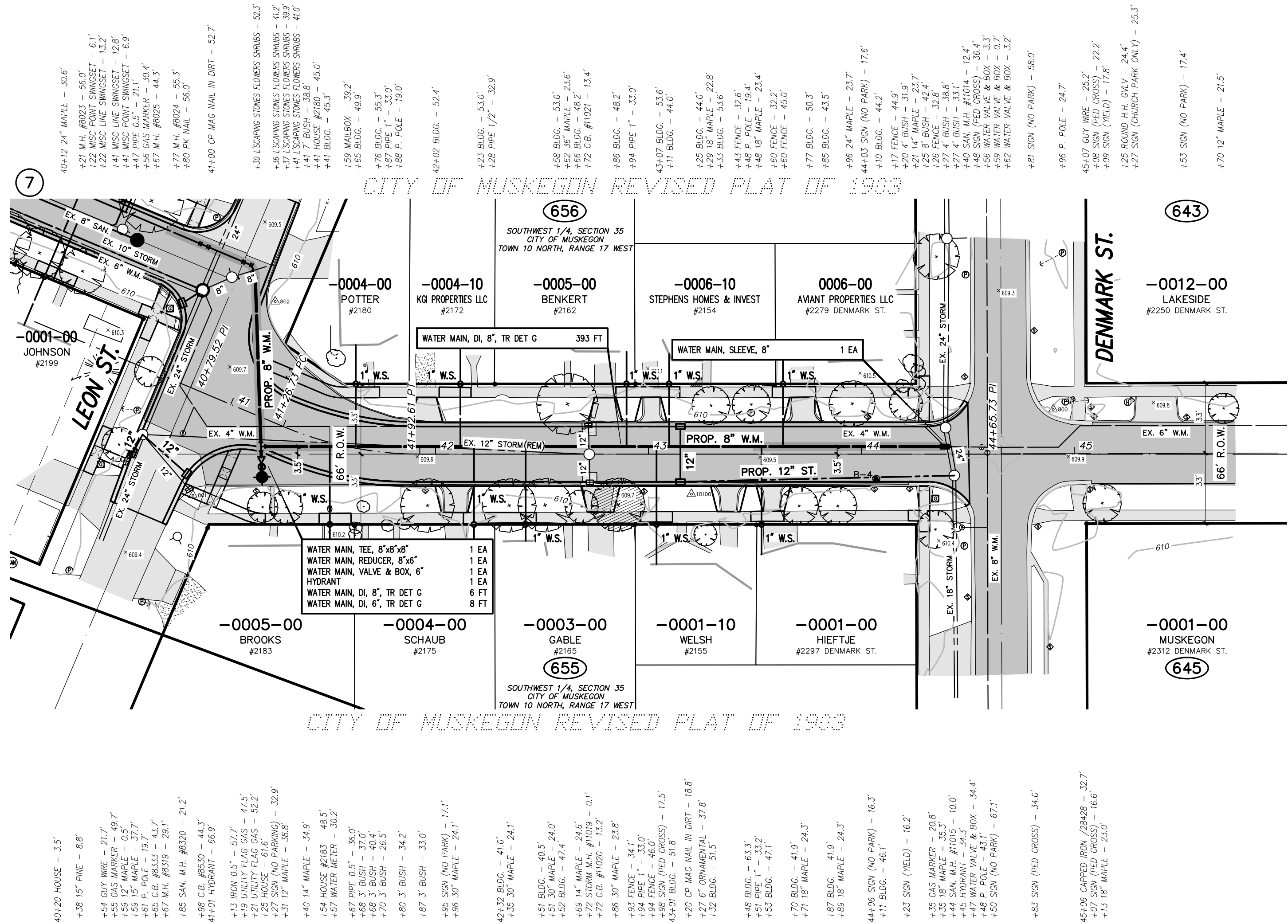
CITY OF MUSKEGON
MUSKEGON COUNTY, MICHIGAN

UTILITY IMPROVEMENTS
MORTON AVENUE

PROJECT NO. 2221072
SHEET NO. 7 OF 15

B.M. EL. 611.43
MORTON AVENUE & DENMARK STREET,
30' ± E & 25' ± N OF C/L 'X', BENCH BE
IN SE. SIDE P. POLE (1.0' A/GROUND)

POINT No.	NORTHING	EASTING	ELEVATION
800	629552.952	1260892.700	610.09
801	629474.646	1260881.200	609.89
802	629573.398	1260892.490	610.44
10100	629556.535	1260887.260	610.08



TOPOGRAPHY TEXT NOTE

TOPOGRAPHY TEXT SHOWN FOR INFORMATION ONLY. SEE REMOVAL PLANS FOR ACTION ITEMS.

WATER SERVICE TOTALS (THIS SHEET)

WATER SERVICE, CORPORATION STOP, 1 INCH	10 EA
WATER SERVICE, CURB STOP AND BOX, 1 INCH	10 EA
WATER SERVICE, 1 INCH	450 LF
WATER SERVICE, CONNECT TO EX.	10 EA
WATER SERVICE, RESTORATION, PRIVATE	10 EA

WATER MAIN CONSTRUCTION NOTES

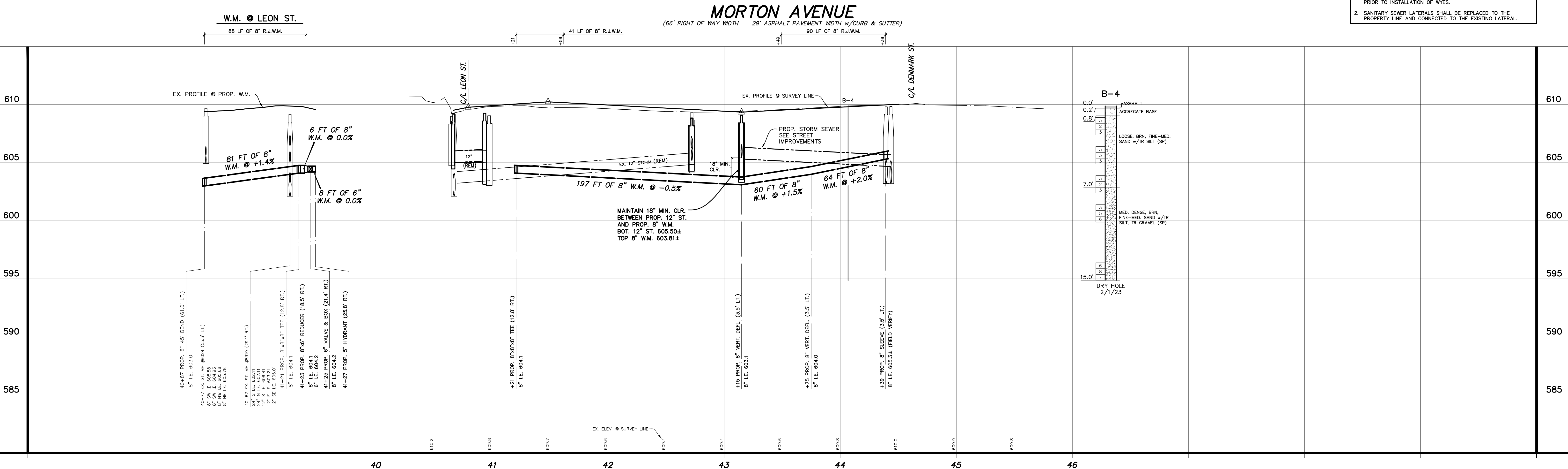
- CONTRACTOR MUST PROVIDE A MINIMUM OF 18" VERTICAL CLEARANCE AND 10' HORIZONTAL CLEARANCE BETWEEN PROPOSED WATER MAIN, AND STORM AND SANITARY SEWERS.
- USE HYDRANT EXTENSIONS OR VERTICAL BENDS ON HYDRANT LEADS TO ENSURE HYDRANT BREAKAWAY FLANGE IS 3' ± FROM FINISHED GRADE. COST SHALL BE INCLUDED IN THE HYDRANT PAY ITEM.
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SANITARY SEWER CONSTRUCTION NOTES

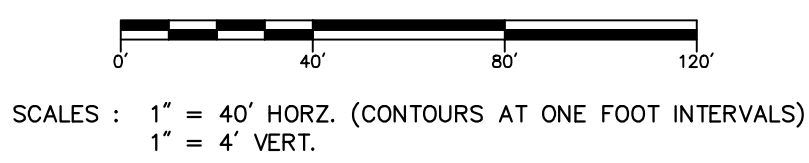
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T:\LOCAL PROJECTS\2023\2221072_MUSKEGON_2023_INF. STREET IMP. & PROJ.MORTON\2221072_29.PRP UTIL. MORTON EASTING - 04/11/24 - 07:27am - Prein&Newhof

811
Know what's below.
Call before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.



NO.	REVISIONS	BY	DATE

DRAWN: J.J.S.
DATE: FEB. '23
CHECKED: M.R.H.
DATE: APR. '23

Prein & Newhof
Engineers • Surveyors • Environmental • Laboratory

CITY OF MUSKEGON
MUSKEGON COUNTY, MICHIGAN

UTILITY IMPROVEMENTS
MORTON AVENUE

PROJECT NO. 2221072
SHEET NO. 8 OF 15

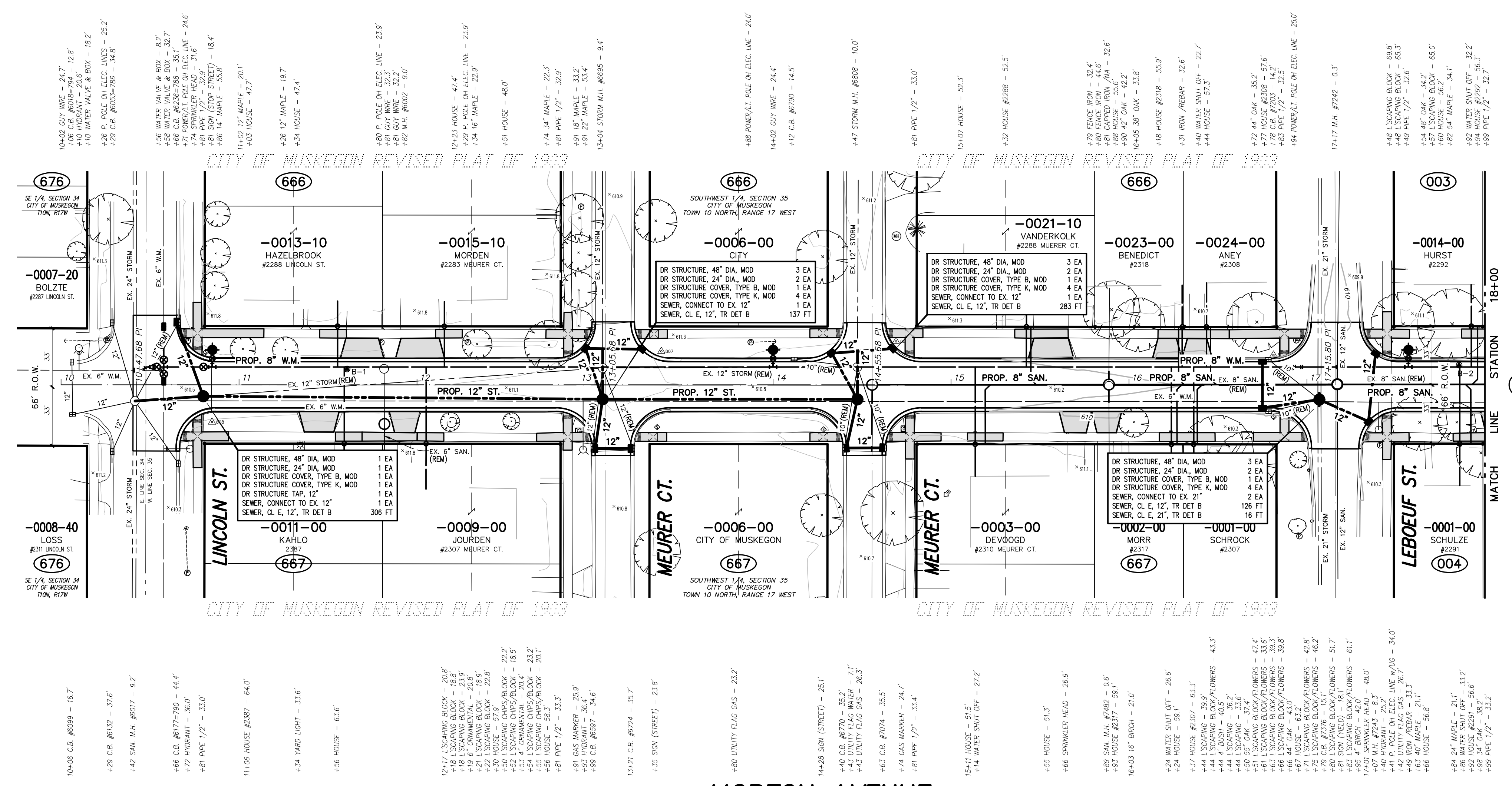
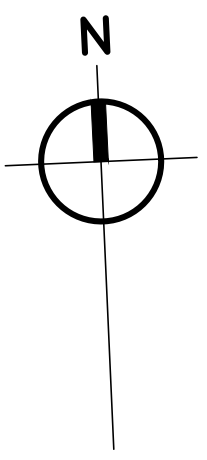
B.M. EL. 612.51
MORTON AVENUE AND LINCOLN STREET,
20' ± W & 25' ± N OF C/L, 1/4" SET 600
NAIL SE SIDE P. POLE (1.8' A/GROUND)

B.M. EL. 612.31
MORTON AVENUE & EAST MEURER COURT,
45' ± E & 60' ± S OF C/L, 1/4" SET 600
STEP ON WEST SIDE HOUSE (0.7' A/GROUND)

B.M. EL. 611.96
MORTON AVENUE AND LEBOUF STREET,
20' ± W & 25' ± N OF C/L, 1/4" SET 600
NAIL SOUTH SIDE P. POLE (2.0' A/GROUND)

CONTROL POINT TABLE

POINT No.	NORTHING	EASTING	ELEVATION
805	629626.673	1260783.350	610.07
806	629643.789	1260762.890	610.83
807	629644.105	12607490.870	611.46
808	629615.638	12607236.920	611.26



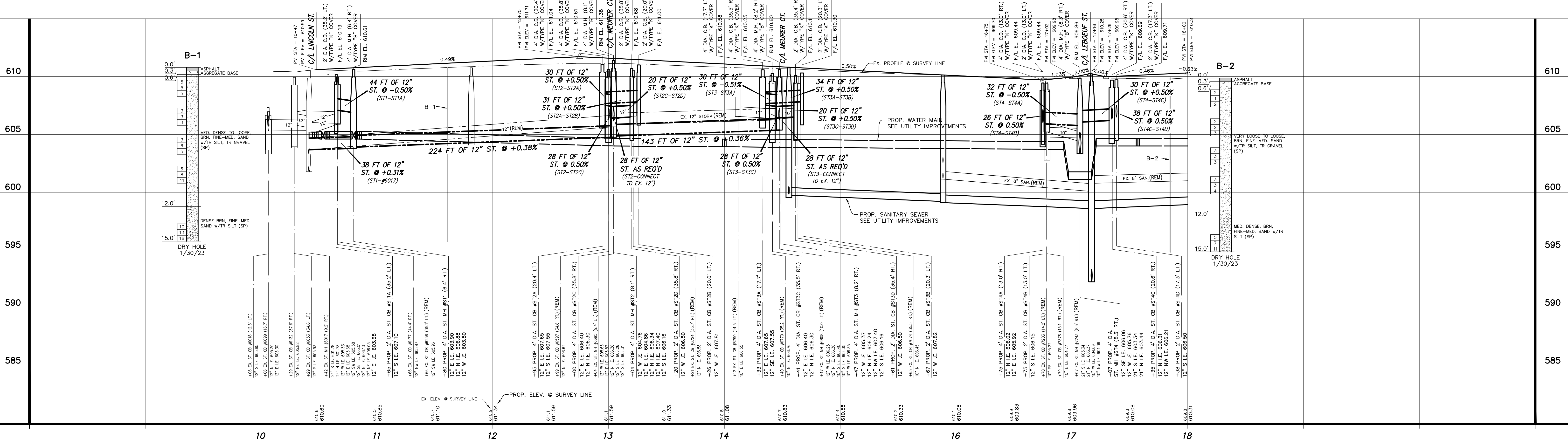
TOPOGRAPHY TEXT NOTE
TOPOGRAPHY TEXT SHOWN FOR INFORMATION ONLY. SEE REMOVAL PLANS FOR ACTION ITEMS.

PROPOSED PAVEMENT LEGEND

- PROPOSED DRIVEWAY, NONREIN CONC, 6 INCH OR SIDEWALK, CONC, 4/6 INCH

NOTES: PROPOSED PAVEMENT ON STREET & INTERSECTIONS NOT SHADED FOR CLARITY.

MORTON AVENUE
(66' RIGHT OF WAY WIDTH 29' ASPHALT PAVEMENT WIDTH w/CURB & GUTTER)



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1" = 4' VERT.

NO.	REVISIONS	BY	DATE
1		J.J.S.	FEB. '23
2		M.R.H.	APR. '23

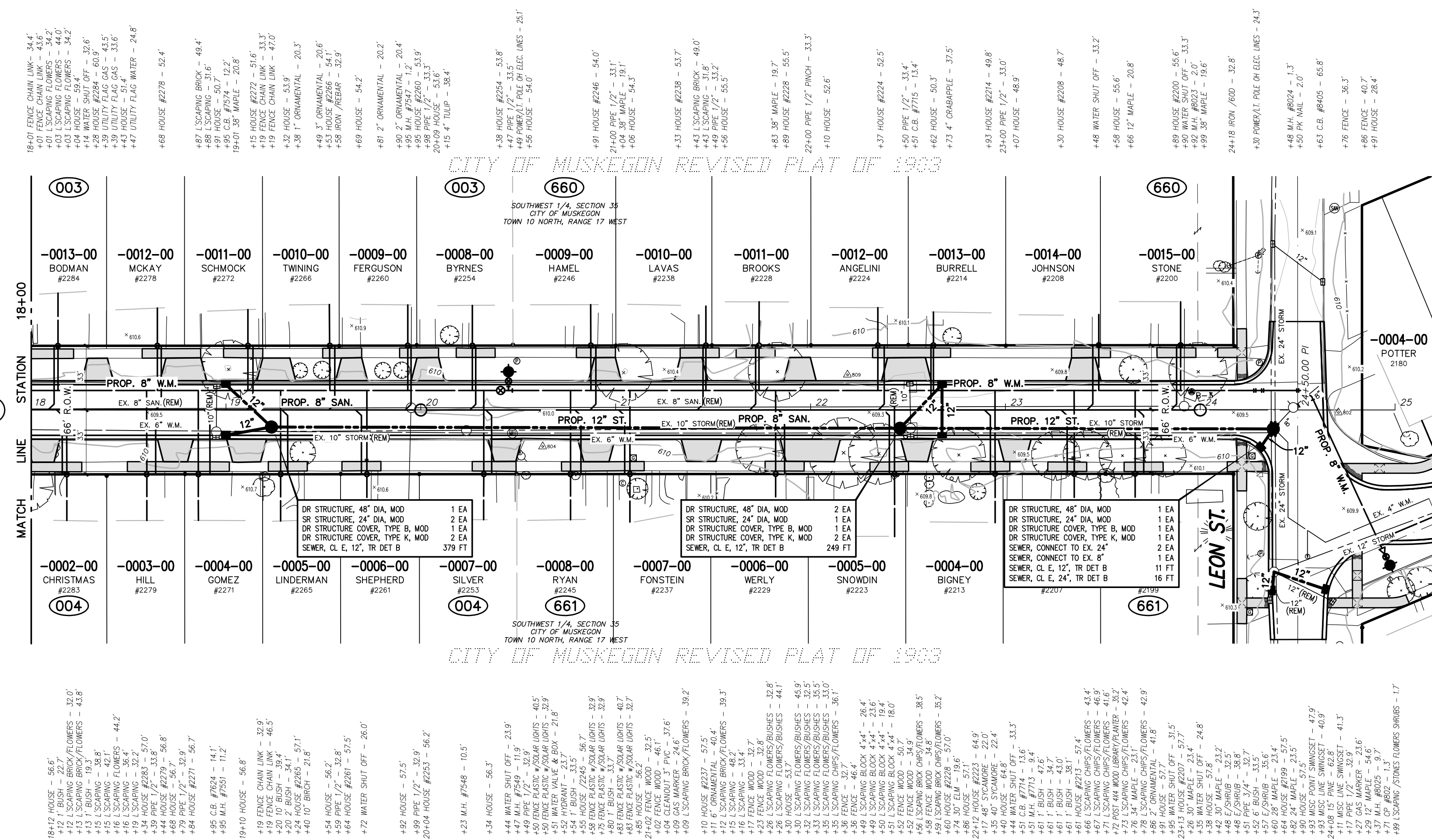
Prein & Newhof
Engineers • Surveyors • Environmental • Laboratory

CITY OF MUSKEGON
MUSKEGON COUNTY, MICHIGAN
STREET IMPROVEMENTS
MORTON AVENUE

PROJECT NO.
2221072
SHEET NO.
9 OF 15

B.M. EL. 611.03
MORTON AVENUE AND LEON STREET, 80'±
N & 20'± W OF C/L "X", FOUND 600 NAIL
EAST SIDE P. POLE (O.G. A/GROUND)

POINT No.	NORTHING	EASTING	ELEVATION
801	629474.646	1260817.950	609.69
802	629513.398	1260822.490	610.44
804	629574.227	1260813.760	610.33
809	629654.022	12608371.700	609.90

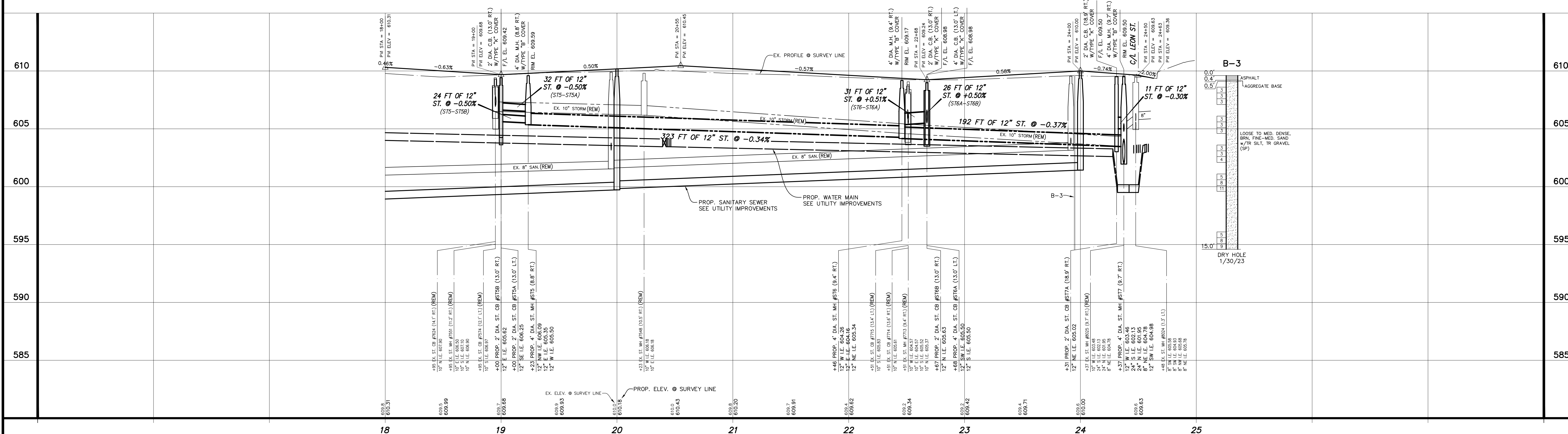


TOPOGRAPHY TEXT NOTE
TOPOGRAPHY TEXT SHOWN FOR INFORMATION ONLY. SEE REMOVAL PLANS FOR ACTION ITEMS.

PROPOSED PAVEMENT LEGEND

NOTES: PROPOSED PAVEMENT ON STREET & INTERSECTIONS NOT SHADED FOR CLARITY.

MORTON AVENUE
(66' RIGHT OF WAY WIDTH 29' CONCRETE PAVEMENT WIDTH w/CURB & GUTTER)



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DATE: J.J.S.
FEB. '23
CHECKED: M.R.H.
DATE: APR. '23

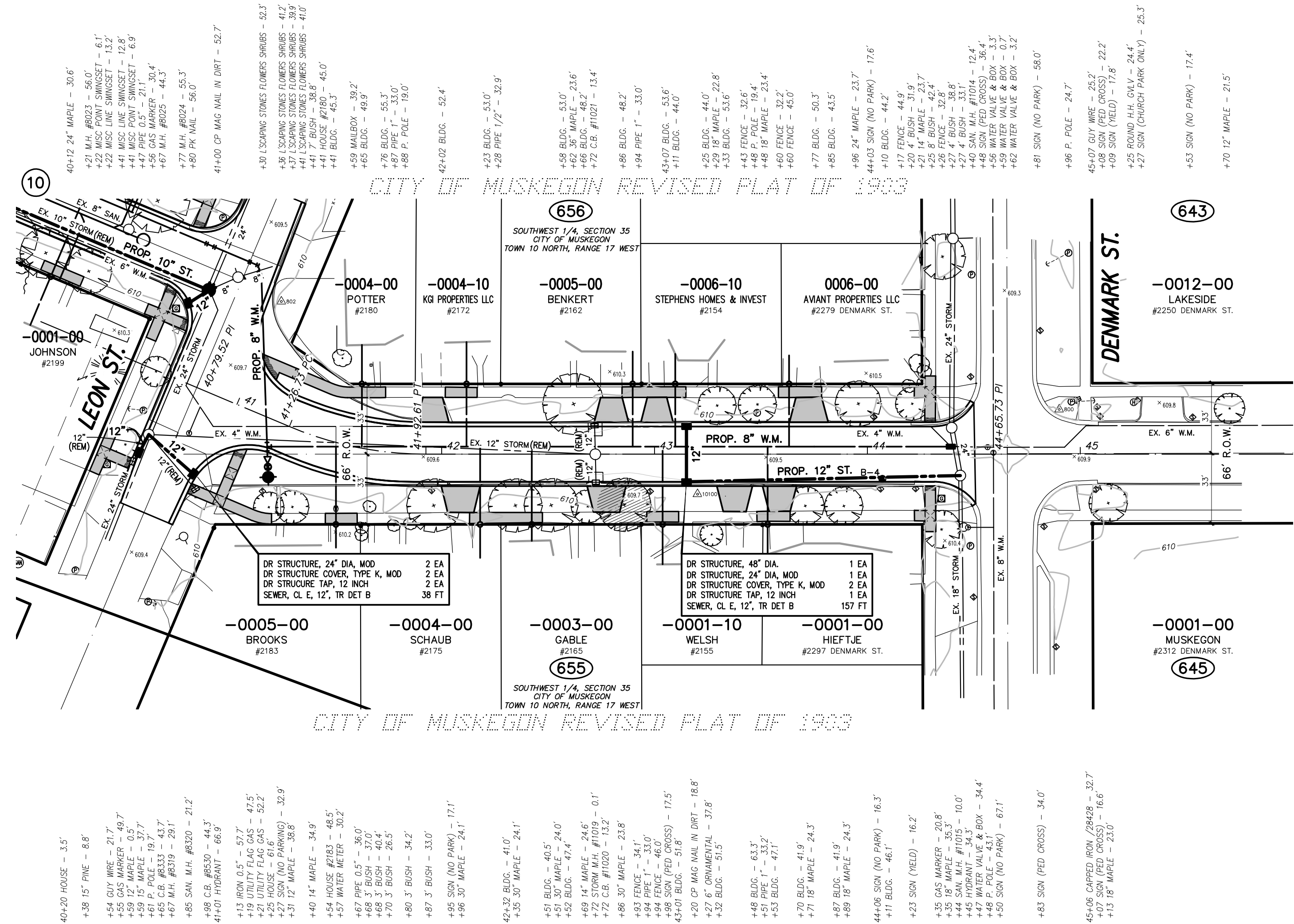
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CITY OF MUSKOGON
MUSKOGON COUNTY, MICHIGAN
STREET IMPROVEMENTS
MORTON AVENUE

PROJECT NO. 2221072
SHEET NO. 10 OF 15

B.M. EL. 611.43
MORTON AVENUE & DENMARK STREET,
30' ± E & 25' ± N OF C/L 'X', BENCH ME
IN SE. SIDE P. POLE (1.0' A/GROUND)

POINT No.	NORTHING	EASTING	ELEVATION
800	629652.952	1260892.700	610.09
801	629474.646	1260881.500	609.69
802	629573.398	1260862.490	610.44
10100	629556.535	1260887.260	610.08



TOPOGRAPHY TEXT NOTE

TOPOGRAPHY TEXT SHOWN FOR INFORMATION ONLY. SEE REMOVAL PLANS FOR ACTION ITEMS.

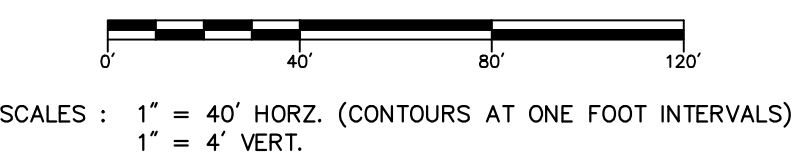
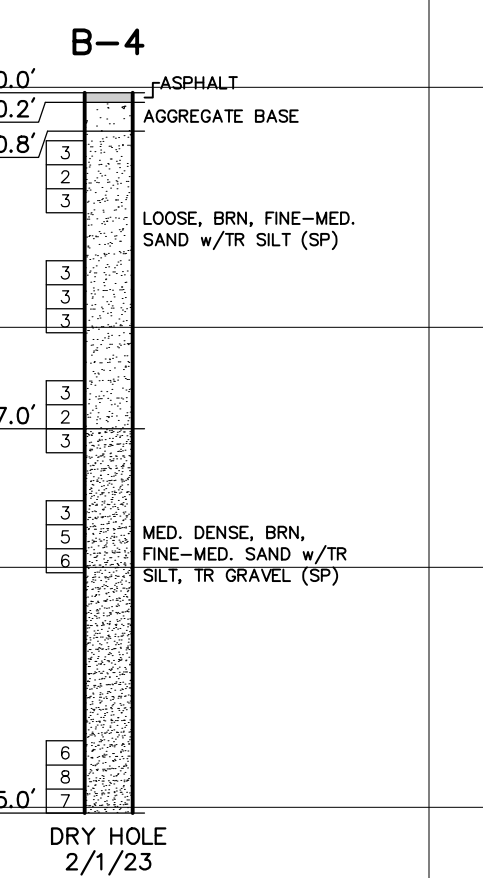
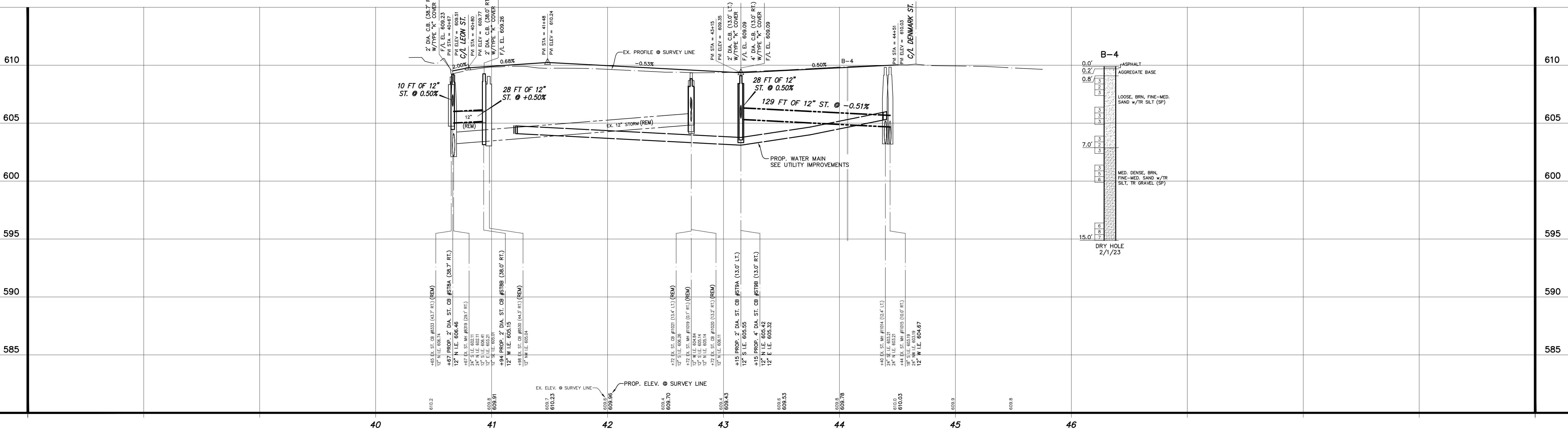
PROPOSED PAVEMENT LEGEND

PROPOSED DRIVEWAY, NONREINFORCED CONC., 6 INCH OR SIDEWALK, CONC., 4/8 INCH

NOTES: PROPOSED PAVEMENT ON STREET & INTERSECTIONS NOT SHADED FOR CLARITY.

MORTON AVENUE

(66' RIGHT OF WAY WIDTH 29' ASPHALT PAVEMENT WIDTH w/CURB & GUTTER)



NO.	REVISIONS	BY	DATE

DRAWN: J.J.S.
 DATE: FEB. '23
 CHECKED: M.R.H.
 DATE: APR. '23

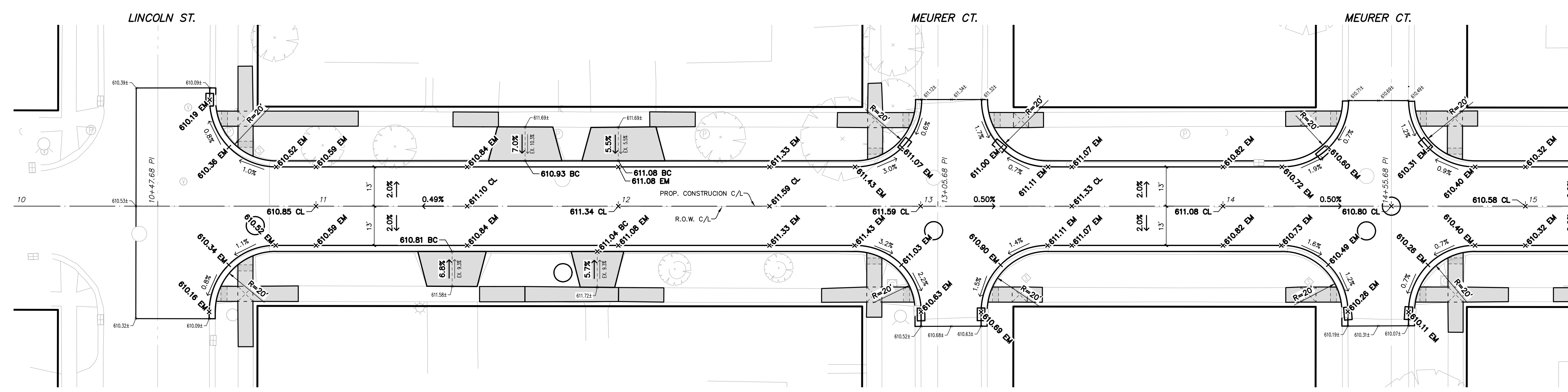
Prein & Newhof
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CITY OF MUSKEGON
 MUSKEGON COUNTY, MICHIGAN
 STREET IMPROVEMENTS
MORTON AVENUE

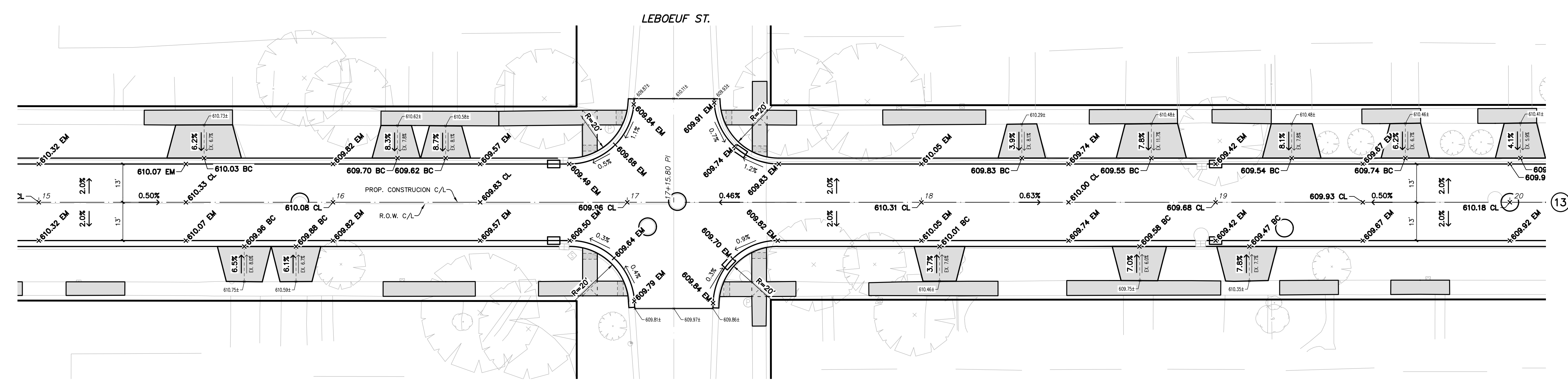
PROJECT NO. 2221072
 SHEET NO. 11 OF 15

I:\DRAWING PROJECTS\2023\2221072_MUSKEGON_2023.DWG - SOUTH - May, 24, 2023 - 07:23am - P:\d\k\m\c

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.



GRADING DETAILS – MORTON AVE. North
SCALE : 1" = 20'



GRADING DETAILS – MORTON AVE. North
SCALE : 1" = 20'

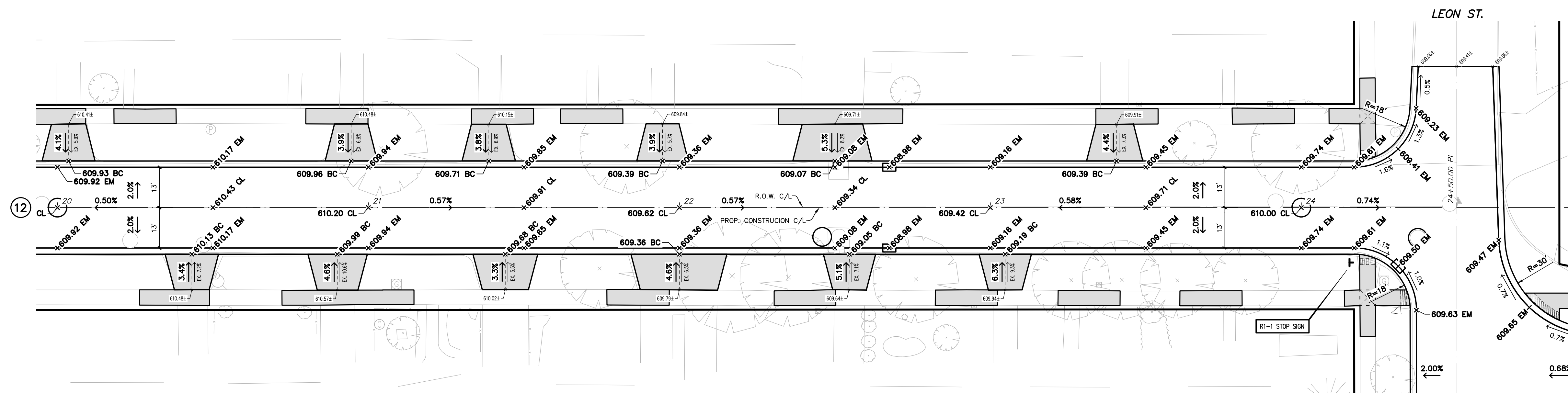
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NO.	REVISIONS	BY	DATE	DRAWN
				J.J.S.
				DATE: FEB. '23
				CHECKED: M.R.H.
				DATE: APR. '23

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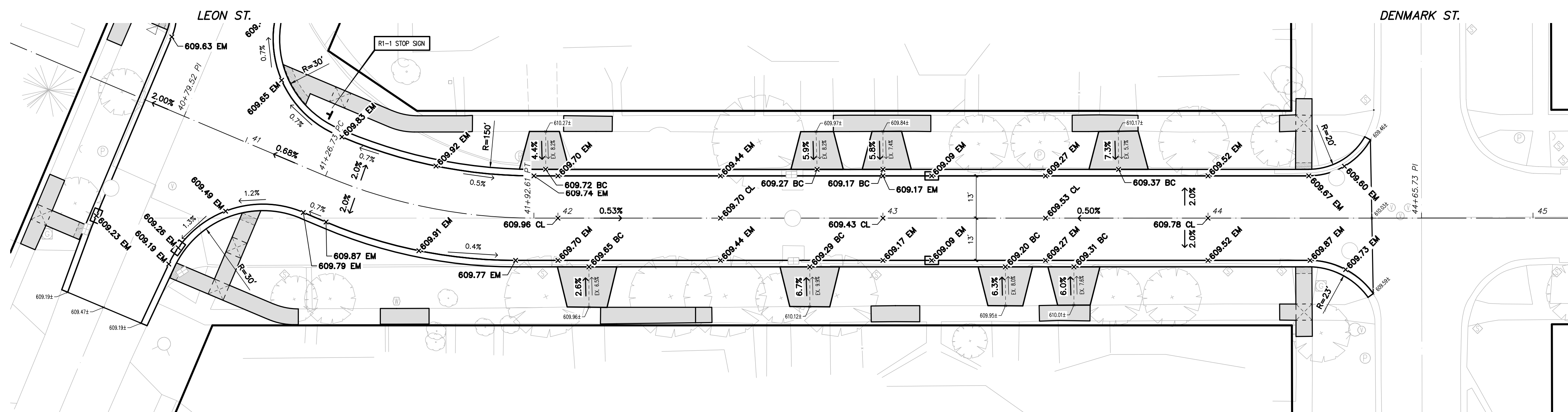
CITY OF MUSKEGON
MUSKEGON COUNTY, MICHIGAN
STREET IMPROVEMENTS
GRADING DETAILS

PROJECT NO.
2221072
SHEET NO.
12 OF 15



GRADING DETAILS – MORTON AVE.

SCALE : 1" = 20'



GRADING DETAILS – MORTON AVE.

SCALE : 1" = 20'



I:\CADD\PROJECTS\2023\221072_MUSKEGON_2023 IMPV STREET IMPV\4_PROJ\MORTON\221072_GRAID_MORTON.DWG - JSMITH - May, 24, 2023 - 07:30am - Prein&Newhof

NO.	REVISIONS	BY	DATE

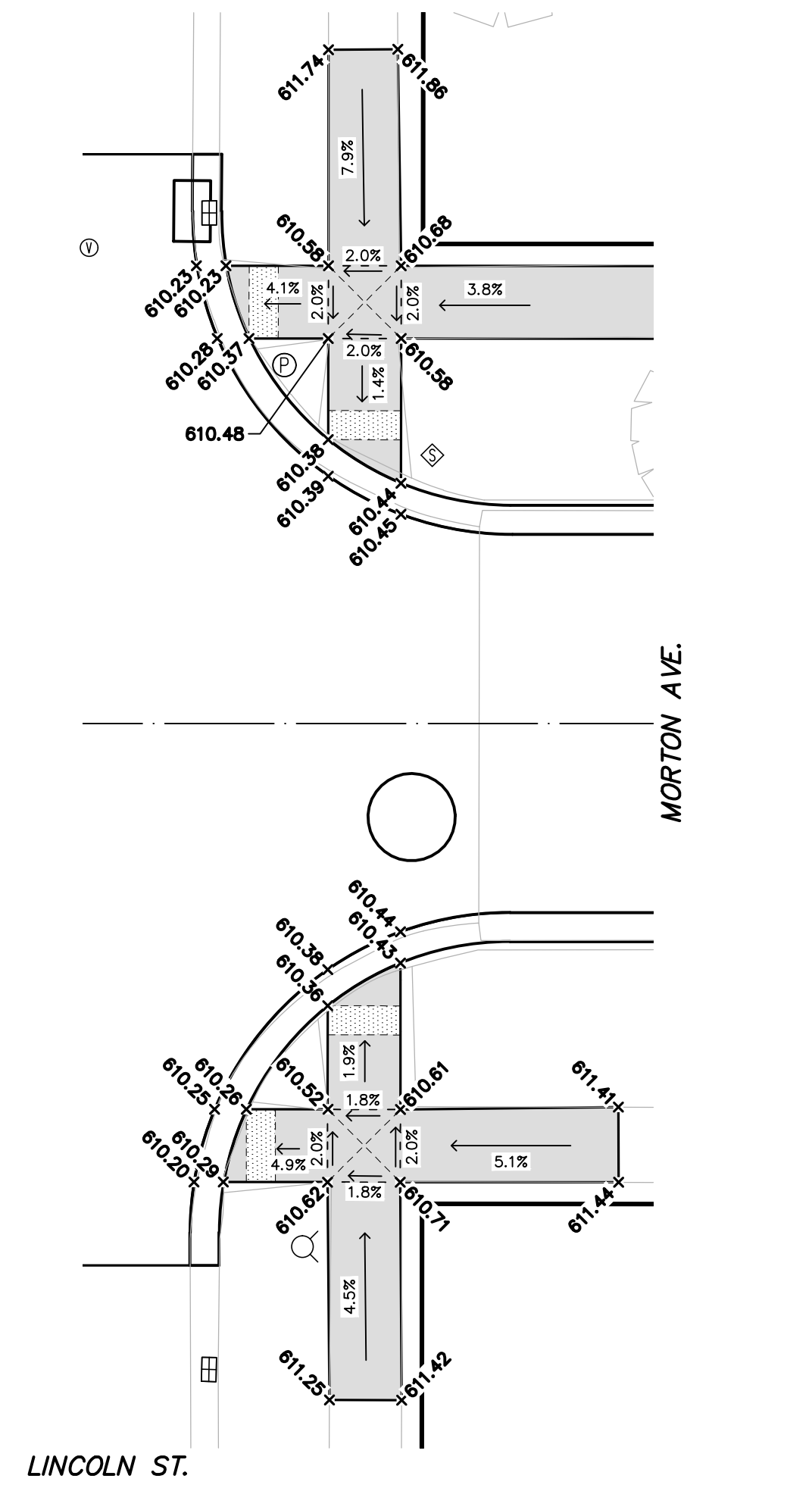
DRAWN
J.J.S.
 DATE
FEB. '23
 CHECKED
M.R.H.
 DATE
APR. '23

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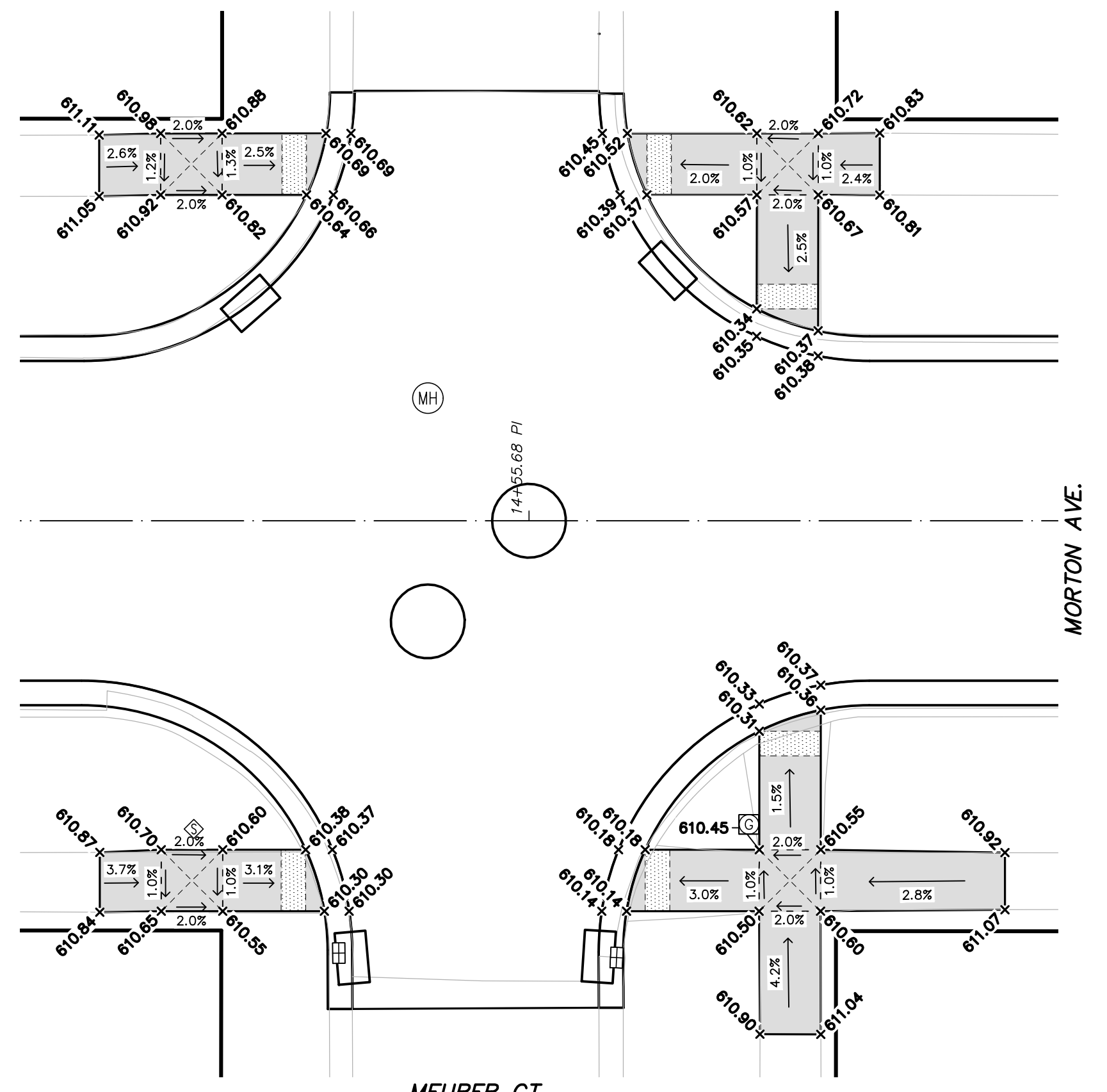
CITY OF MUSKEGON
 MUSKEGON COUNTY, MICHIGAN
 STREET IMPROVEMENTS
 GRADING DETAILS

PROJECT NO.
2221072
 SHEET NO.
13 OF 15

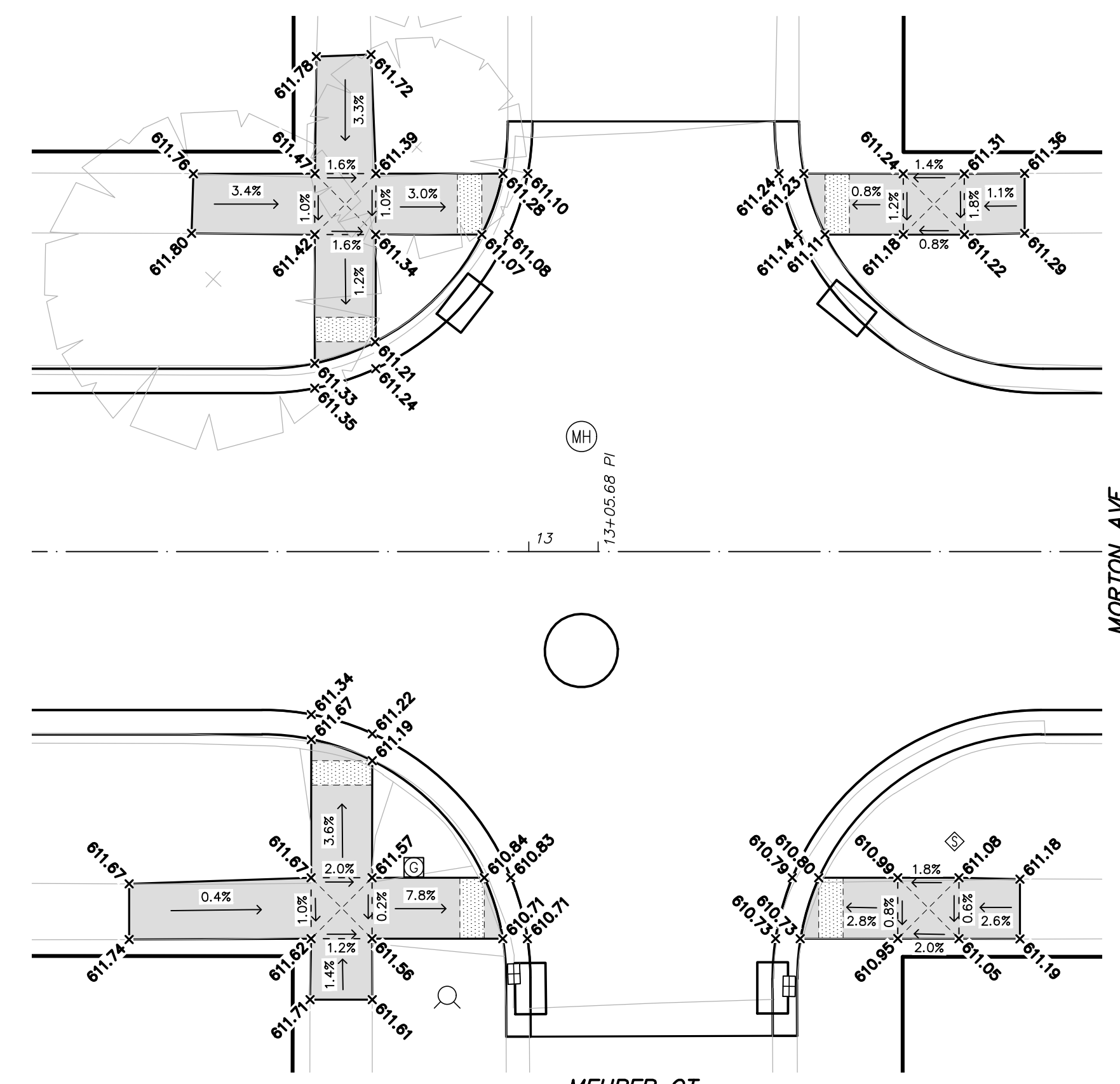
I:\CADD\PROJECTS\2023\2221072_MUSKEGON_2023\DWG\2221072_SIDWALK GRADING SW MORTON.DWG - (SMITH - May, 24, 2023 - 07:10am - Prebid.dwg)



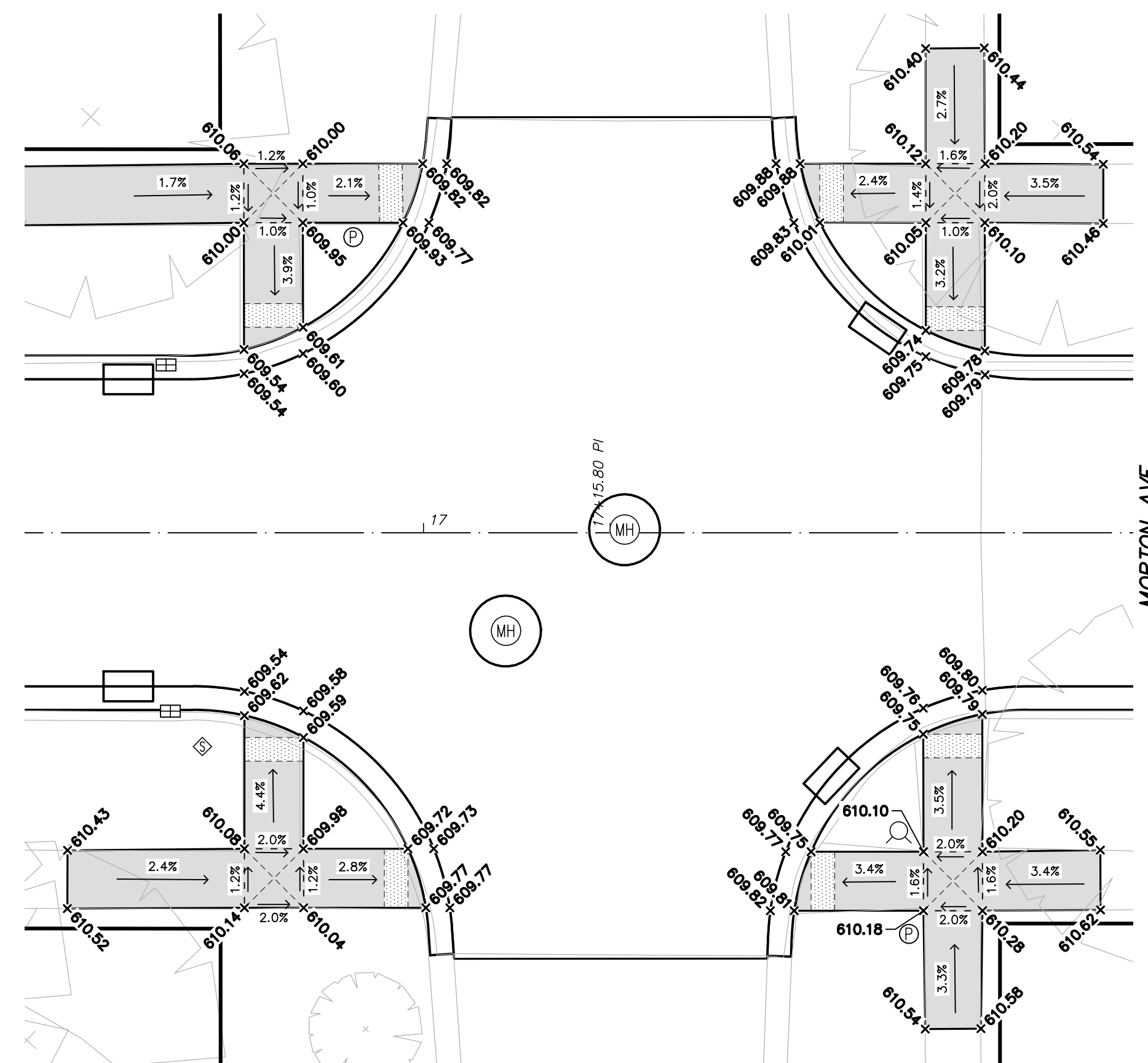
**SIDWALK GRADING DETAILS
 MORTON AVE. & LINCOLN ST.**
 SCALE : 1" = 10'
 North



**SIDWALK GRADING DETAILS
 MORTON AVE. & MEURER CT.**
 SCALE : 1" = 10'
 North



**SIDWALK GRADING DETAILS
 MORTON AVE. & MEURER CT.**
 SCALE : 1" = 10'
 North



**SIDWALK GRADING DETAILS
 MORTON AVE. & LEBOEUF ST.**
 SCALE : 1" = 10'
 North

NO.	REVISIONS	BY	DATE	DRAWN
				J.J.S.
				DATE: FEB. '23
				CHECKED: M.R.H.
				DATE: APR. '23

Prein & Newhof
 Engineers • Surveyors • Environmental • Laboratory

CITY OF MUSKEGON
 MUSKEGON COUNTY, MICHIGAN
 STREET IMPROVEMENTS
 SIDEWALK GRADING DETAILS

PROJECT NO.
 2221072
 SHEET NO.
 14 OF 15

