BELMONT AVENUE SIDEWALKS PHASE 1

LIBERTY TOWNSHIP
TRUMBULL COUNTY, OHIO

LOCATION MAP

NOT TO SCALE

LATITUDE: 41°09'33" N LONGITUDE: 80°39'53" W

DESIGN DESIGNATIONS

DESIGN FUNCTIONAL CLASSIFICATION _____ MINOR ARTERIAL

PORTION TO BE IMPROVED _____

NHS PROJECT _____ NO

DESIGN EXCEPTIONS

NONE REQURIED

ADA DESIGN WAIVER

REQURIED

INDEX OF SHEETS

TITLE SHEET	GT-1
KEY MAP / SCHEMATIC PLAN	KM-1
GENERAL NOTES	GN-1
GENERAL NOTES / MAINTENANCE OF TRAFFIC NOTES	GN-2
GENERAL DETAILS	GD-1
GENERAL SUMMARY	GG-1
SUBSUMMARIES	GS-1 - GS-3
PLAN AND PROFILE - STA. 0+00 TO STA. 16+50	GP-1 - GP-3
PLAN AND PROFILE - STA. 4+50 TO STA. 9+50	GP-4
CROSS SECTIONS	XS-1 - XS-5
CURB RAMP DETAILS	CR-1 - CR-12
TRAFFIC SIGNALS	CP-1 - CP-7

ADMINISTRATION

TOWNSHIP ADMINISTRATOR	MARTHA WEIRICK
FISCAL OFFICER	MATTHEW CONNELLY

TRUSTEES

ARNIE CLEBONE	TRUSTEE
GREG CIZMAR	TRUSTEE
DEVON STANLEY	TRUSTEE

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF CONSTRUCTION OF APPROXIMATELY 4,822 SQUARE FEET OF 4" SIDEWALK ALONG THE EAST SIDE OF BELMONT AVENUE (S.R. 193) FROM I-80 TO CHURCHILL ROAD IN LIBERTY TOWNSHIP.

THE FOLLOWING ITEMS ARE INCLUDED AS PART OF THE PROJECT:

- CLEARING AND GRUBBING
- CURB RAMP CONSTRUCTION
- LINEAR GRADING
- CROSSWALK STRIPING
- TRAFFIC SIGNAL MODIFICATIONS

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.14 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.14 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

APPROVALS

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED BY:

DAVID DeCHRISTOFARO, P.E., P.S. _____ DATE _____

TRUMBULL COUNTY ENGINEER

UNDERGROUND UTILITIES

Contact Two Working Days Before You Dig

OHIO811.org Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764

(Non-members must be called directly)

PLANS PREPARED BY:

GPD GROUP®

Glaus, Pyle, Schomer, Burns & DeHaven, Inc.

100 Federal Plaza East, Suite 200
Youngstown, Ohio 44503
330.572.2100 Fax 330.572.2101

Copyright; Glaus, Pyle, Schomer, Burns & DeHaven, Inc. 2022

ENGINEERS SEAL

STATE OF OHIO — CHRISTOPHER J. TOLNAR — E-68152 — REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____

DATE: 05/12/25

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	1-19-24	TC-41.40	10-18-13			
BP-4.1	7-19-13	TC-52.20	1-15-21			
BP-5.1	7-15-22	TC-74.10	7-21-23			
BP-7.1	1-17-25	TC-83.20	7-19-24			
		TC-84.20	1-19-24			
HL-30.11	7-21-23	TC-85.10	1-19-24			
HL-30.22	1-17-25					
MT-95.31	7-19-19					
MT-95.32	4-19-19					
MT-95.60	4-19-19					
MT-101.90	7-17-20					
MT-105.10	1-17-20					
MT-110.10	7-19-13					

SUPPLEMENTAL SPECIFICATIONS

800-2023	1-17-25
832	7-19-24

SPECIAL PROVISIONS

NONE

FEDERAL PROJECT NO. —

PID NO. —

CONSTRUCTION PROJECT NO. —

RAILROAD INVOLVEMENT NONE

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GT-1

Drawing File: C:\PW\2022\P2022267\R00 - Belmont Ave Sidewalks Phase 1\MRTA\Design\Sheets\P2022267R00gt-1.dwg Layout: GT-1
Date: May 09, 2025 Time: 11:42 am Twist: -15.7079633

Technician: nshaffer

CONTROL DATA

TYPICAL CONTROL POINT DESCRIPTION:
5/8 " x 30" REBAR GPD RED CAP

- CP:1
  N: 550024.04
  E: 2473714.56
  STA. 14+08.99
  OFFSET: 38.75' LT. ℄ CONST. BELMONT AVENUE

- CP:2
  N: 549608.89
  E: 2473801.12
  STA. 9+93.05
  OFFSET: 43.89' RT. ℄ CONST. BELMONT AVENUE

- CP:3
  N: 549163.32
  E: 2473728.77
  STA. 5+48.18
  OFFSET: 32.66' LT. ℄ CONST. BELMONT AVENUE

- CP:4
  N: 548670.49
  E: 2473801.64
  STA. 0+54.61
  OFFSET: 35.56' RT. ℄ CONST. BELMONT AVENUE

- CP:9
  N: 550179.62
  E: 2473869.54
  STA. 15+63.10
  OFFSET: 117.69' RT. ℄ CONST. BELMONT AVENUE

- CP:10
  N: 548788.17
  E: 2473715.03
  STA. 1+73.17
  OFFSET: 49.95' LT. ℄ CONST. BELMONT AVENUE

NOTE: ADDITIONAL CONTROL POINTS ARE LOCATED OUTSIDE OF PROJECT LIMITS.

BENCHMARK DATA:

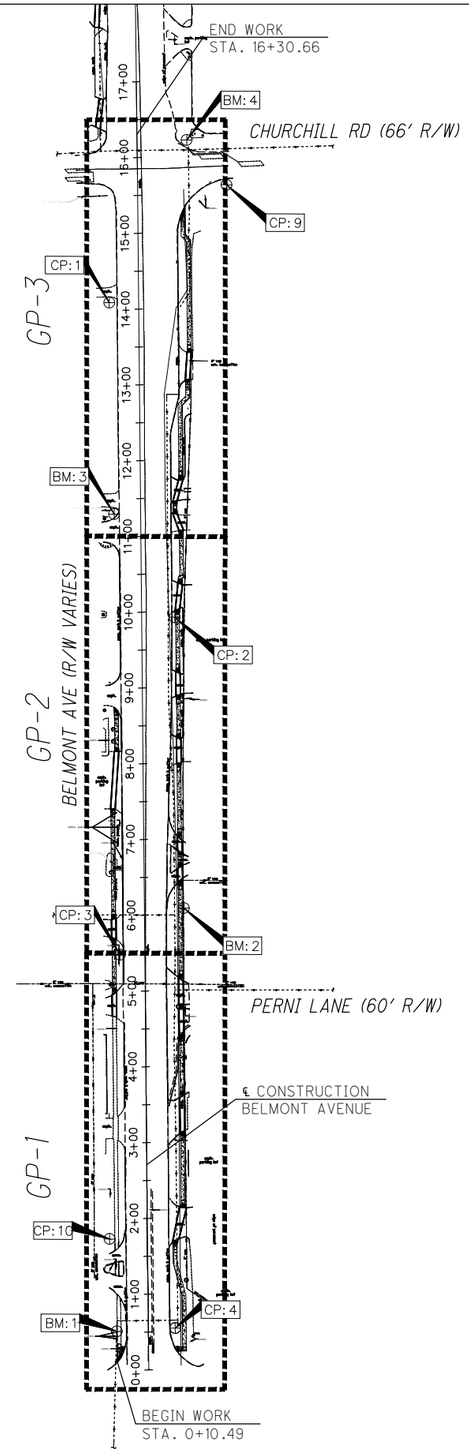
- BM:1
  ELEV. = 1073.83
  STA. 0+50.99
  OFFSET: 41.35 LT. ℄ CONST. BELMONT AVENUE
  DESC.: BOX CUT ON NE CORNER TRAFFIC CONTROL BOX PAD

- BM:2
  ELEV. = 1065.30
  STA. 6+09.15
  OFFSET: 53.37 RT. ℄ CONST. BELMONT AVENUE
  DESC.: X CUT ON WEST BOLT FH

- BM:3
  ELEV. = 1067.56
  STA. 11+29.86
  OFFSET: 34.98 LT. ℄ CONST. BELMONT AVENUE
  DESC.: NAIL IN TPP

- BM:4
  ELEV. = 1063.22
  STA. 16+22.56
  OFFSET: 65.73 RT. ℄ CONST. BELMONT AVENUE
  DESC.: TOP NORTH WEST BOLT ON SGPOLE

NOTE: ADDITIONAL BENCH MARKS ARE LOCATED OUTSIDE OF PROJECT LIMITS.



N

0 50 100 200
Horizontal Scale in Feet

Calculated NDS
Checked CJT

Key Map / Schematic Plan

Liberty Township
Belmont Avenue Sidewalks
Phase 1

KM-1

Drawing File: C:\2022\2022267\800 - Belmont Ave Sidewalks Phase 1\INSTALL\Design\Sheets\2022267100gb-1.dwg Layout: KM-1
Date: Dec 05, 2024 Time: 4:31 pm Twist: -1.57079633
Technician: nshaffer

GENERAL NOTES

THE CONSTRUCTION ON THIS PROJECT SHALL BE GOVERNED BY THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) CONSTRUCTION AND MATERIAL SPECIFICATIONS (2023), SUPPLEMENTED BY CONTRACT SPECIFICATION DOCUMENTS WHERE APPLICABLE.

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS CONCERNING THE EXISTING FACILITIES HAVE BEEN OBTAINED FROM DILIGENT FIELD DATA COLLECTION OF THE EXISTING FACILITIES AND DO NOT NECESSARILY REPRESENT AS-BUILT CONDITIONS. THE CONTRACT SHALL BE BASED ON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON AN EXAMINATION OF THE WORKSITE BY THE CONTRACTOR. ALL PROJECT WORK SHALL BE BASED UPON THE ACTUAL DETAILS AND DIMENSIONS PRESENTED ON THESE PLANS AND SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL APPLICABLE SECTIONS OF OSHA STANDARD 29 CFR 1910.146 AND OSHA STANDARD 29 CFR 1926. THE COST OF THIS WORK SHALL BE INCLUDED IN THE ITEM THAT REQUIRED THE WORK.

UTILITIES

THE CONTRACTOR SHALL USE THE FOLLOWING PROCEDURE AT EACH LOCATION WHERE WORK IS PERFORMED, IN ACCORDANCE WITH SECTIONS 105.07 AND 107.16 IN THE CONSTRUCTION AND MATERIALS SPECIFICATIONS:

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE OHIO UTILITIES PROTECTION SERVICE (OHIO811.ORG), THE OHIO & GAS PROCEDURES UNDERGROUND PROTECTION SERVICE (OGPUPS), THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 4 HEADQUARTERS AND ALL NON REGISTERED UTILITY OWNERS AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN ALL AREAS.

OHIO811.ORG
OGPUPS 1-800-925-0988
ODOT 330-786-3145 MICHELLE CHANEY

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ENBRIDGE GAS OHIO
320 SPRINGSIDE DR, STE. 320
AKRON, OHIO 44333
(330) 664-2409
ATTN: BRYAN DAYTON

OHIO EDISON
730 SOUTH AVENUE
YOUNGSTOWN, OHIO 44502
(330) 740-7704
ATTN: MICHAEL BECK

AT&T
50 W BOWERY ST., 6TH FLOOR
AKRON, OHIO 44308
(330) 384-2245
ATTN: RICH WILSON

ZAYO FIBER SOLUTIONS
6650 SOUTH AVENUE
BOARDMAN, OHIO 44512
(769) 216-8095
ATTN: JOHN P. BRUCE

LIBERTY TOWNSHIP
1315 CHURCHILL HUBBARD RD
YOUNGSTOWN, OHIO 44505
(330) 501-6623
ATTN: WAYNE HICKMAN

CHARTER COMMUNICATION
3315 N. RIDGE ROAD E., SUITE 100
ASHTABULA, OHIO 44004
(440) 261-4607
ATTN: JASON SPRAGUE

CITY OF GIRARD
100 W MAIN ST, SE #4
GIRARD, OHIO 44420
(216) 316-6847
ATTN: DENNIS MEEK

ODOT 4 TRAFFIC
2088 S ARLINGTON RD
AKRON, OHIO 44306
(330) 786-2267
ATTN: MICHELLE CHANEY

TRUMBULL COUNTY
SANITARY ENGINEER
842 YOUNGSTOWN-KINGSVILLE RD.
VIENNA, OHIO 44473
(330) 675-7753
ATTN: GARY NEWBROUGH

CITY OF YOUNGSTOWN
PUBLIC WORKS DEPARTMENT
CITY HALL, 5TH FLOOR
26 S. PHELPS STREET
YOUNGSTOWN, OHIO 44503
(330) 742-8800
ATTN: CHUCK SHASHO

EVERSTREAM SOLUTIONS
1228 EUCLID AVENUE
CLEVELAND, OHIO 44115
(216) 905-0780
ATTN: GIO REILLO

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

CHURCHILL PARK AVOIDANCE

THE CONTRACTOR SHALL NOT STAGE OR STORE ANY CONSTRUCTION EQUIPMENT AND/OR MATERIALS WITHIN THE PARKING AREA OR RESTRICT ACCESS TO CHURCHILL PARK LOCATED ADJACENT TO BELMONT AVENUE.

ODOT CMS SECTION 104.02

SECTION 104.02 OF THE ODOT CMS DOES NOT APPLY TO THIS PROJECT. THE QUANTITIES LISTED WITHIN THE PROPOSAL ARE FOR ESTIMATING PURPOSES ONLY. THE TOWNSHIP RESERVES THE RIGHT TO ELIMINATE, INCREASE OR DECREASE ANY INDIVIDUAL COMPONENT OF THE PROJECT WITHOUT INVALIDATING THE SUBMITTED PRICES FOR ANY ITEM. THE CONTRACT VALUE WILL BE BASED ON THE ACTUAL WORK PERFORMED AND THE UNIT PRICES SUBMITTED FOR THE INDIVIDUAL ITEMS SELECTED FOR COMPLETION BY THE TOWNSHIP.

ITEM SPECIAL - MISC.: PRECONSTRUCTION VIDEO TAPING

LIBERTY TOWNSHIP SHALL REQUIRE AN AUDIOVISUAL RECORDING OF THE PROJECT LIMITS AND ADJACENT AREAS, ESPECIALLY DRIVEWAY APRONS, MAILBOXES, LANDSCAPING AND APPROACHES PRIOR TO CONSTRUCTION. THE RECORDING SHALL BE DVD FORMAT AND A COPY SHALL BE RETAINED AT THE LIBERTY TOWNSHIP ADMINISTRATION OFFICE. THIS RECORDING SHALL BE MADE IN ACCORDANCE WITH TOWNSHIP SPECIFICATIONS AND SHALL BE PAID FOR AS A LUMP SUM, TO BE COMPLETED TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL, MISC.: PRECONSTRUCTION VIDEO TAPING, LS

PROFILE AND ALIGNMENT

PLACE THE PROPOSED SIDEWALK TO FOLLOW THE ALIGNMENT AND PROFILE AS INDICTED IN THE PLANS. THE HORIZONTAL ALIGNMENT OF THE PROPOSED WALK MUST BE FIELD MARKED PRIOR TO THE START OF CLEARING ON EACH SECTION. THE ENGINEER WILL REVIEW AND APPROVE THE PLACEMENT OF THE WALK PRIOR TO THE START OF CONSTRUCTION FOR THE INDIVIDUAL SEGMENT.

TEMPORARY SUPPORT OF UTILITY POLES

THE CONTRACTOR SHALL CONTACT THE OWNER OF ANY UTILITY POLE THAT MAY BE AFFECTED BY THE PROPOSED WORK IN ORDER TO MAKE ARRANGEMENTS WITH THE UTILITY COMPANY TO PROVIDE A FIELD CREW FOR TEMPORARILY SUPPORTING UTILITY POLES DURING THE CONSTRUCTION OF THE PROPOSED WORK. PAYMENT FOR THE ABOVE STATED WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 608, 609, OR 611 ITEM.

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

ALL CONTROL POINTS SHOULD BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE SURVEYOR SHALL RUN AN INDEPENDENT HORIZONTAL AND VERTICAL TRAVERSE THROUGH ALL BENCHMARKS PROVIDED AND PROVIDE A RECORD COPY OF THE FIELD BOOK TO THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES OR POSSIBLE OMISSIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.

ALL LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

THIS ITEM IS PROVIDED FOR ANY TREE OR STUMP REMOVAL WITHIN THE LIMITS OF THE PROJECT. A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING, AS PER PLAN. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

ITEM 209 - LINEAR GRADING, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 209, THE CONTRACTOR SHALL PERFORM THE GRADING, INCLUDING ALL PROJECT EXCAVATION AND EMBANKMENT CONSTRUCTION FOR SIDEWALK, CURB RAMPS, CURB AND DRIVE CONSTRUCTION REGARDLESS OF THE MATERIAL ENCOUNTERED IN ACCORDANCE WITH THE TYPICAL SECTIONS AND DETAILS. THE CONTRACTOR SHALL PROVIDE FOR POSITIVE DRAINAGE TO CATCH BASINS AND OPEN CONDUIT.

THIS ITEM INCLUDES GRADING THE AREAS TO BE SEEDED MADE NECESSARY BY THE REMOVAL OF EXISTING WALK, CONSTRUCTION OF THE NEW WALK, DRIVE ADJUSTMENTS, CURB AND NEW CURB RAMPS.

ALSO INCLUDED IN THIS PAY ITEM IS SEEDING AND MULCHING, COMMERCIAL FERTILIZER, LIME, 4" TOPSOIL AND WATER PER ODOT CMS 659, EXCAVATION AND EMBANKMENT PER ODOT CMS 203, AND ANY NECESSARY ADDITIONAL EMBANKMENT NEEDED TO BE USED IN ORDER TO MEET SURROUNDING EXISTING GRADE. ALL MATERIAL USED FOR EMBANKMENT PURPOSES SHALL CONFORM TO 703.16-C OF THE 2023 ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

EXACT LIMITS OF GRADING SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 209 LINEAR GRADING, AS PER PLAN. PAYMENT SHALL BE MADE BASED ON LENGTH (STATION = 100 FEET) AS MEASURED ALONG THE LENGTH OF THE PROPOSED WALK WHICH INCLUDES WORK ON BOTH SIDES (FRONT/CURB AND BACK/RW) OF THE WALK ALONG THE LENGTH OF THE WALK. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 209 - LINEAR GRADING, AS PER PLAN ___16___ STATION

ITEM 608 - CURB RAMP, AS PER PLAN

ALL TRUNCATED DOME INSERTS MUST BE APPROVED BY THE ENGINEER AND SHALL MEET ODOT CMS REQUIREMENTS. ALL OTHER REQUIREMENTS OF SECTION 608 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS AND APPLICABLE STANDARD DRAWINGS SHALL STILL APPLY.

ADDITIONALLY, ALL NECESSARY STAKING, SAWCUTTING, EXCAVATION, AGGREGATE/CONCRETE BASE, CURB REMOVAL, ASPHALT PAVEMENT, CONCRETE CURB, CONCRETE WALK, AND BACKFILL SHALL BE INCLUDED IN THE COST OF THE CURB RAMP. PAVEMENT AND CURB REPLACED SHALL BE PER ODOT CMS 2023 SPECIFICATIONS AND TO A COMPOSITION EQUAL TO OR BETTER THAN THE REMOVED PAVEMENT AND CURB.

ALL WORK DESCRIBED ABOVE, INCLUDING LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 608 - CURB RAMP, AS PER PLAN.

ITEM 609 - CURB, TYPE 7, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 609 AND STANDARD CONSTRUCTION DRAWING BP-5.1, THE CONTRACTOR SHALL CONSTRUCT THE CURB (KNEE WALL) PER THE DETAIL ON SHEET GD-1.

ALL WORK DESCRIBED ABOVE INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER FOOT FOR ITEM 609 - CURB, TYPE 7, AS PER PLAN.

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO ADJUST THE EXISTING MANHOLES TO GRADE. THE LOCATION OF THE MANHOLES SHALL BE DETERMINED BY THE PROJECT ENGINEER. ONLY PRECAST CONCRETE GRADE RINGS SHALL BE USED FOR VERTICAL ADJUSTMENT, UNLESS OTHERWISE APPROVED. ALL OTHER REQUIREMENTS SHALL STILL BE APPLICABLE.

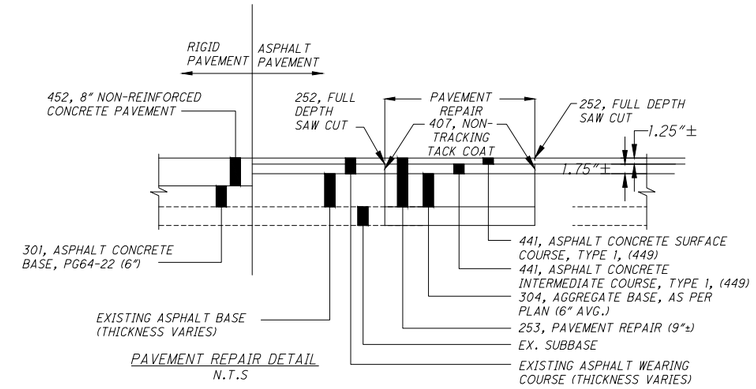
ITEM 638 - VALVE BOX ADJUSTED TO GRADE

AN ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO ADJUST THE EXISTING VALVE BOXES TO GRADE. THE LOCATION OF THE VALVE BOXES SHALL BE DETERMINED BY THE PROJECT ENGINEER.

ITEM 638, VALVE BOX ADJUSTED TO GRADE ___6___ EACH.

ITEM 253 - PAVEMENT REPAIR, AS PER PLAN

THIS ITEM SHALL CONSIST OF FULL DEPTH SAWING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING PAVEMENT AS SHOWN BELOW:



PAVEMENT REPAIR DETAIL
N.T.S

PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 253 - PAVEMENT REPAIR, AS PER PLAN ___23___ SY

LEGEND

EXISTING

- PROPERTY LINE
- CENTER LINE
- Ex R/W — RIGHT-OF-WAY LINE
- EXISTING CATCH BASIN
- EXISTING CURB INLET
- EXISTING FIRE HYDRANT
- EXISTING WATER GATE VALVE
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- EXISTING TELEPHONE POLE
- EXISTING GUY ANCHOR
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING STORM SEWER
- SAN — EXISTING SANITARY SEWER
- W — EXISTING WATER SERVICE
- G — EXISTING GAS SERVICE
- T — EXISTING TELEPHONE SERVICE
- SA — EXISTING SANITARY MANHOLE
- EXISTING SIGNAGE
- EXISTING POST
- mb — EXISTING MAILBOX
- EXISTING TREE/STUMP
- 000 — EXISTING CONTOUR
- X:# — CONTROL POINT/BENCHMARK

BALLOON ABBREVIATION LEGEND

- D-## — STRUCTURE
- CW-## — CROSSWALK
- SW-## — SIDEWALK
- CR-## — CURB RAMP
- S-## — SIGNAGE

Calculated NDS
Checked CJT

General Notes

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GN-1

Drawing File: O:\2022\2022267\06 - Belmont Ave Sidewalks Phase 1 (WRTA)\Design\Sheets\2022267006gn-1.dwg Layout: GN-1
Date: May 27, 2025 Time: 8:39 am Twist: -1.5707963.3
Technician: nshaffer

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE TOWNSHIP, REPRESENTATIVES OF THE TOWNSHIP AND THE CONTRACTOR, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE TOWNSHIP.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR, AT THEIR COST, TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ENVIRONMENTAL PLAN NOTES:

BEST MANAGEMENT PRACTICES - SOIL EROSION AND SEDIMENTATION CONTROL

WATER COLUMN AND SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER. THESE SHALL COMPLY WITH ODOT'S HANDBOOK FOR SEDIMENT AND EROSION CONTROL, WHICH MAY BE FOUND AT: HTTP://WWW.DOT.STATE.OH.US./DRRC

CONTRACTOR'S EQUIPMENT - OPERATION AND STORAGE

A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. PAVERS, ROLLERS AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY. OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE R/W, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY, THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER / SUPERVISOR HAS BEEN GRANTED.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 7:00 P.M. AND 7:00 A.M. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

EXISTING SERVICE NOTE

THE CONTRACTOR SHALL CONSIDER THAT EACH HOUSE/BUSINESS ALONG THE PROPOSED SIDEWALK ALIGNMENT WILL HAVE UNDERGROUND UTILITY SERVICES INCLUDING GAS, WATER, SANITARY, ROOF DRAINS, SUMP DRAINS, STORM INLETS, ELECTRIC, TELEPHONE AND CABLE. ANY ADDITIONAL WORK REQUIRED TO EXPOSE THESE UTILITIES AND INSTALL THE SIDEWALK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPLICABLE ITEMS.

ADVANCED NOTICE TO PROCEED

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE TOWNSHIP A DETAILED SCHEDULE 15 DAYS PRIOR TO THE START OF CONSTRUCTION, ON HOW THEY PROPOSE TO PROSECUTE THE CONSTRUCTION OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OR PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

COMMERICAL/RESIDENTIAL NOTIFICATION

THE CONTRACTOR SHALL SUBMIT A WRITTEN NOTIFICATION TO BE REVIEWED BY THE ENGINEER PRIOR TO DELIVERY TO ANY RESIDENTS/BUSINESSES THAT WILL BE AFFECTED BY THE CONSTRUCTION ACTIVITY. COORDINATION WITH OWNER WILL BE REQUIRED DURING CONSTRUCTION IN ORDER TO MAINTAIN ACCESS TO DRIVES.

NOTIFICATION AND CONTACTS

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING ENTITIES IN WRITING AND VIA TELEPHONE AT LEAST EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION ACTIVITIES. INCLUDED IN THE NOTIFICATION SHALL BE PROJECTED DATES AND THE TIME FRAMES OF ANY LANE CLOSURES.

1. LIBERTY TOWNSHIP
   1315 CHURCHILL HUBBARD ROAD
   YOUNGSTOWN, OHIO 44505
   PHONE: (330) 501-6623
   ATTENTION: WAYNE HICKMAN

2. LIBERTY TOWNSHIP POLICE DEPARTMENT
   1315 CHURCHILL HUBBARD ROAD
   YOUNGSTOWN, OHIO 44505
   PHONE: (330) 759-1315

3. TRUMBULL COUNTY SHERIFF'S OFFICE
   150 HIGH STREET
   WARREN, OHIO 44481
   PHONE: (330) 675-2508
   PHONE: (330) 533-6866

4. LIBERTY TOWNSHIP FIRE DEPARTMENT
   4001 LOGAN WAY
   YOUNGSTOWN, OHIO 44505
   PHONE: (330) 759-1315

5. LIBERTY BOARD OF EDUCATION OFFICE
   4115 SHADY ROAD
   YOUNGSTOWN, OHIO 44505
   PHONE: (330) 759-0807

6. OHIO STATE HIGHWAY PATROL
   CANFIELD PATROL POST
   500 SOUTH BROAD STREET
   CANFIELD, OHIO 44406
   PHONE: (330) 533-6866

7. OHIO DEPARTMENT OF TRANSPORTATION
   DISTRICT 4
   2088 S. ARLINGTON ROAD
   AKRON, OHIO 44306
   PHONE: (330) 786-4923
   ATTENTION: CHRISTINE SURMA

SHOULD ANY OF THE PROJECTED DATES AND TIME FRAMES OF THE START AND END OF THE ROAD CLOSURES CHANGE THROUGHOUT THE DURATION OF THE PROJECT, THE AGENCIES LISTED ABOVE MUST BE NOTIFIED IMMEDIATELY OF SUCH CHANGES.

ITEM 614 - MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00PM FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00PM FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY	12:00PM MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00PM TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00PM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00PM THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00PM FRIDAY THROUGH 6:00AM MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN ACCORDANCE WITH CMS 108.07 FOR EACH CALENDAR DAY THE ABOVE RESTRICTION IS VIOLATED.

MAINTENANCE OF TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT OR COMPLETED PAVEMENT DURING WORK HOURS. THE CONTRACTOR SHALL PROVIDE BARRIERS AND FLAGGERS TO MAINTAIN A MINIMUM OF ONE-LANE, TWO DIRECTION TRAFFIC DURING WORK HOURS. A MINIMUM OF ONE TEN FOOT LANE IN EACH DIRECTION SHALL BE OPENED TO TRAFFIC UPON THE COMPLETION OF WORK EACH DAY.

2. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

3. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED THERETO.

4. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS ONE (1) MILE URBAN.

5. ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED OR PROTECTED AS DIRECTED BY THE ENGINEER. AT A MINIMUM, STEEL ROADWAY PLATES MAY BE USED IN APPROVED LOCATIONS AND MUST BE PINNED IN PLACE AND PROPERLY RAMPED WITH FIRM AND UNYIELDING MATERIAL WITH APPROPRIATE WARNING SIGNS POSTED. THIS PROTECTION SHALL BE INCLUDED AND PAID UNDER THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

6. IF IT IS NECESSARY TO STOP ALL TRAFFIC FOR THE ERECTION OF SPAN WIRE, THE WORK SHALL BE SO ARRANGED THAT THE STOPPAGE IS LESS THAN TEN (10) MINUTES IN ANY ONE (1) THIRTY (30) MINUTE PERIOD. NO STOPPAGE OF TRAFFIC SHALL OCCUR FOR THE ERECTION OF SIGNAL SUPPORTS, CUTTING AND INSTALLING LOOP DETECTOR WIRE, OR HANGING SPAN WIRE AND SIGNAL HEADS WITHOUT A LAW ENFORCEMENT OFFICER WITH A PATROL CAR AT THE SITE FOR ASSISTANCE IN CONTROLLING TRAFFIC. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE SERVICES AND SCHEDULING OF SAID LAW ENFORCEMENT OFFICER WITH PATROL CAR.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

WEIGHTED CHANNELIZERS

THE WEIGHTED CHANNELIZER SHALL BE PREDOMINATELY ORANGE IN COLOR AND SHALL BE MADE OF A LIGHTWEIGHT, FLEXIBLE AND DEFORMABLE MATERIAL. THEY SHALL BE AT LEAST 42 INCHES IN HEIGHT WITH A WEIGHTED BASE. THEY MAY HAVE A "HANDLE" OR LIFTING DEVICE WHICH EXTENDS ABOVE THE 42 INCH MINIMUM HEIGHT.

THE MARKINGS ON THE WEIGHTED CHANNELIZER SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES 6 INCHES WIDE. EACH WEIGHTED CHANNELIZER SHALL HAVE A MINIMUM OF TWO ORANGE AND TWO WHITE STRIPES. ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES SHALL NOT EXCEED 2 INCHES WIDE. THE WEIGHTED CHANNELIZER SHALL HAVE A 4-INCH MINIMUM WIDTH, REGARDLESS OF ORIENTATION.

ON FREEWAYS AND MULTILANE HIGHWAYS:
USE OF WEIGHTED CHANNELIZERS ON FREEWAYS AND MULTILANE HIGHWAYS SHALL BE LIMITED TO SHORT-TERM OPERATION, GENERALLY TWELVE HOURS OR LESS, FOR EITHER DAY OR NIGHT. UPON COMPLETION OF WORK WITHIN THE ABOVE NOTED TIME PERIOD, THE WEIGHTED CHANNELIZERS SHALL BE REMOVED. THE WEIGHTED CHANNELIZERS MAY AGAIN BE PLACED ON THE HIGHWAY WHEN THE WORK IS TO RESUME ON THE FOLLOWING DAY OR NIGHT. ANY LANE CLOSURE USING CHANNELIZATION DEVICES, EXPECTED TO REMAIN FOR MORE THAN TWELVE HOURS, SHALL REQUIRE THE USE OF DRUMS OR BARRIERS.

WHEN USED AT NIGHT, WEIGHTED CHANNELIZERS SHALL ONLY BE PLACED IN THE "TANGENT AREA." THE "TANGENT AREA" IS DEFINED AS THE AREA AFTER THE TRANSITION TAPER WHERE THE WORK TAKES PLACE. DRUMS SHALL BE USED IN THE TRANSITION TAPERS FOR NIGHT OPERATIONS.

ON OTHER HIGHWAYS:
THERE ARE NO DURATIONS OF WORK RESTRICTIONS FOR USE OF WEIGHTED CHANNELIZERS ON ALL OTHER TYPES OF HIGHWAYS, DAY OR NIGHT. ON THESE ROADWAYS THE WEIGHTED CHANNELIZER MAY BE USED IN THE TRANSITION TAPERS AS WELL AS IN THE TANGENT AREAS, DAY OR NIGHT.

MAXIMUM SPACING OF THE WEIGHTED CHANNELIZER SHALL BE 40 FEET.

STEPS SHOULD BE TAKEN TO ENSURE THAT THE WEIGHTED CHANNELIZERS WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. BALLASTS SHOULD NOT PRESENT A HAZARD IF THE WEIGHTED CHANNELIZERS ARE INADVERTENTLY STRUCK, NOR SHOULD THEY AFFECT THE VISIBILITY OF THE WEIGHTED CHANNELIZERS. ALL BALLASTS USED SHOULD BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

TIME LIMITATION, CURB RAMP

THE MAXIMUM ALLOWABLE TIME FOR THE CONTRACTOR TO HAVE AN INDIVIDUAL CURB RAMP AND ASSOCIATED SIDEWALK LEADING INTO THE CURB RAMP OUT OF SERVICE FOR THE REMOVAL AND REPLACEMENT SHALL BE 14 CONSECUTIVE CALENDAR DAYS (THE TIME PERIOD INCLUDES ALL WORK LISTED IN THE BASIS OF PAYMENT PER CMS 608.09, INCLUDING ALL REMOVAL, REPLACEMENT, AND BACKFILL ASSOCIATED WITH THE CURB RAMPS, AND CURING TIME PERIOD).

AT THE CONCLUSION OF CONSTRUCTING OF THE CURB RAMP AND PRIOR TO OPENING TO PEDESTRIAN TRAFFIC THE CONTRACTOR SHALL ENSURE THAT THE REQUIREMENTS OF STANDARD CONSTRUCTION DRAWING BP-7.1 ARE MET. THE CONTRACTOR SHALL USE ASPHALT AS A WEDGE, OR SUBMIT ANOTHER METHOD APPROVED BY THE ENGINEER, TO ENSURE THE TRANSITION FROM THE CURB RAMP TO THE ROADWAY ARE PER STANDARD CONSTRUCTION DRAWING BP-7.1. ALL COSTS TO PERFORM THIS WORK SHALL BE INCIDENTAL TO THE ASSOCIATED PAY ITEMS FOR THE INSTALLATION OF THE CURB RAMP.

SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $1000 PER DAY PER AFFECTED RAMP THAT THE AFFECTED CURB RAMP REMAINS OUT OF SERVICE BEYOND 14 CONSECUTIVE CALENDAR DAYS.

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

EXISTING TRAFFIC SIGNALS

ODOT DISTRICT 4 CURRENTLY HAS WAVETRONIX TYPE SIGNALS AT THE STATE ROUTE 193 (BELMONT AVENUE)/INTERSTATE 80 WESTBOUND RAMPS INTERSECTION AND AT THE STATE ROUTE 193 (BELMONT AVENUE)/STATE ROUTE 304 (CHURCHILL ROAD) INTERSECTION. ALL EXISTING SIGNAL ITEMS SHALL NOT BE DISTURBED BY THE CONTRACTOR. IF ANY CONSTRUCTION WORK DAMAGES ANY EXISTING SIGNAL ITEMS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIRS, AT THE CONTRACTOR'S EXPENSE.

FOR ANY EXISTING SIGNAL DAMAGE BY THE CONTRACTOR, ODOT DISTRICT 4 WILL DETERMINE IF THE REPAIR WORK CAN BE DONE IN-HOUSE BY ODOT OR IF AN ODOT PRE-QUALIFIED SIGNAL CONTRACTOR MUST BE HIRED, AT THE EXPENSE OF THE CONTRACTOR THAT ORIGINALLY CAUSED THE EXISTING SIGNAL DAMAGE. ADDITIONALLY, ONLY LAW ENFORCEMENT IS PERMITTED FOR FLAGGING OPERATIONS WITHIN A SIGNALIZED INTERSECTION.

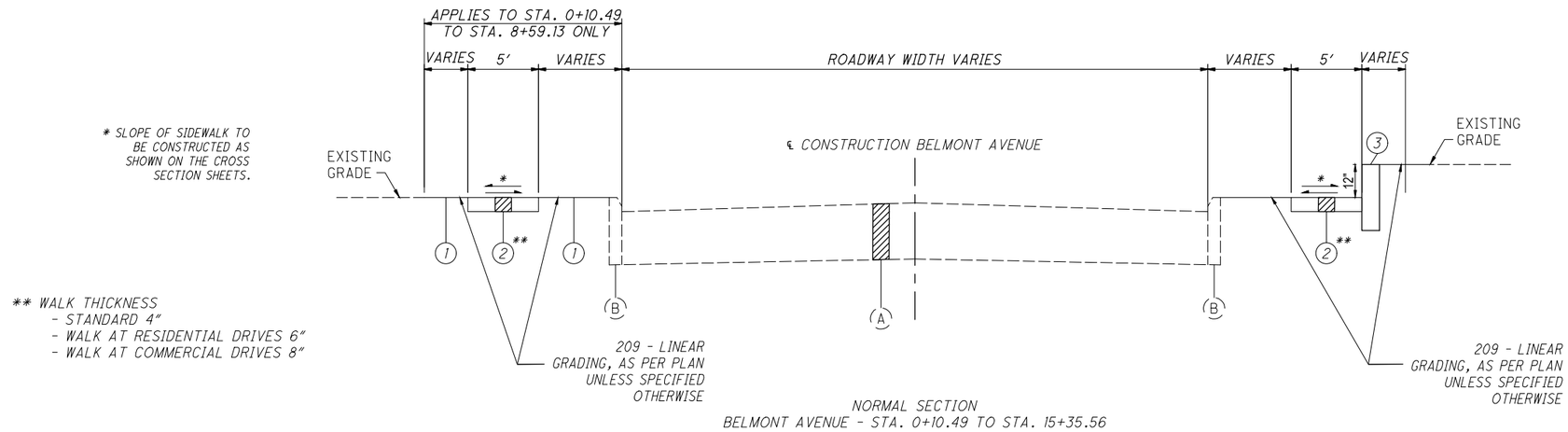
Calculated NDS
Checked CJT

General Notes / Maintenance of Traffic Notes

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GN-2

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1 (WRTA)\Design\Sheets\2022267000gn-1.dwg Layout: GN-2
Date: May 09, 2025 Time: 12:11 pm Twist: -1.57079633
Technician: nshaffer



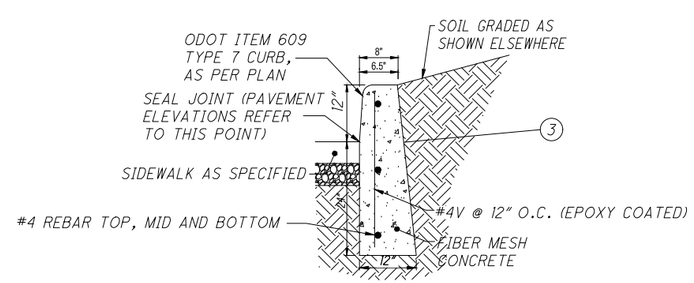
NORMAL SECTION
BELMONT AVENUE - STA. 0+10.49 TO STA. 15+35.56

PROPOSED LEGEND (BASE BID)

1. ITEM 209 - LINEAR GRADING, AS PER PLAN
2. ITEM 608 - 4" CONCRETE WALK
3. ITEM 609 - CURB, TYPE 7, AS PER PLAN

EXISTING LEGEND

A. EXISTING ASPHALT CONCRETE PAVEMENT
B. EXISTING CURB



ITEM 609 - CURB, TYPE 7, AS PER PLAN
N.T.S.
STA. 11+75.13 TO STA. 13+06.70 & STA. 14+85.82 TO STA. 15+35.56

Calculated NDS
Checked CJT

General Details

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GD-1

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1 (WRTA)\Design\Sheets\2022267000gn-1.dwg Layout: GD-1
Date: Jan 27, 2025 Time: 4:47 pm Twist: -1.5707963S3
Technician: nshaffer

SHEET NUMBERS								ITEM	BASE BID GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
GN-1	GN-2	GS-2	GS-3	CP-1	CP-3	CP-4	CP-6					
											ROADWAY	
LS								201	LS		CLEARING AND GRUBBING, AS PER PLAN	
		44						202	44	SY	CONCRETE MEDIAN REMOVED	
			24					203	24	CY	EXCAVATION	
			52					203	52	CY	EMBANKMENT	
16								209	16	STA	LINEAR GRADING, AS PER PLAN	GN-1
		5,380						608	5,380	SF	4" CONCRETE WALK	
		2,066						608	2,066	SF	CURB RAMP, AS PER PLAN	GN-1
		201						609	201	FT	CURB, TYPE 7, AS PER PLAN	GN-1
											EROSION CONTROL	
								832	5,000	EACH	EROSION CONTROL	
											DRAINAGE	
		14						611	14	FT	12" CONDUIT, TYPE B	
		1						611	1	EACH	CATCH BASIN, NO. 2-2B	
		2						611	2	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	GN-1
											WATER WORK	
6								638	6	EACH	VALVE BOX ADJUSTED TO GRADE	GN-1
											PAVEMENT	
23								253	23	SY	PAVEMENT REPAIR, AS PER PLAN	GN-1
											TRAFFIC CONTROL	
					8			630	8	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
					18.4			630	18.4	SF	SIGN, FLAT SHEET	
					76			642	76	FT	STOP LINE, TYPE 1	
		132			179			642	311	FT	CROSSWALK LINE, 12", TYPE 1	
					374			642	374	FT	CROSSWALK LINE, 24", TYPE 1	
						237	92	646	329	FT	REMOVAL OF PAVEMENT MARKING	
											TRAFFIC SIGNAL	
				40				611	40	FT	4" CONDUIT, TYPE E	CP-1
					127			625	127	FT	CONDUIT, 2", 725.04	
					127			625	127	FT	TRENCH	
					2			625	2	EACH	PULL BOX, 725.08, 18"	
					5			625	5	EACH	GROUND ROD	
					127			625	127	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	CP-1
					8			632	8	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	CP-2
					8			632	8	EACH	ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN	CP-2
					8			632	8	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
					1,451			632	1,451	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
					5			632	5	EACH	PEDESTAL FOUNDATION	
					1,435			632	1,435	FT	LOOP DETECTOR LEAD-IN CABLE	
					5			632	5	EACH	PEDESTAL, 8', TRANSFORMER BASE	
					1			632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	CP-1
					2			632	2	EACH	SIGNALIZATION, MISC.: ACCESSIBLE PEDESTRIAN PUSHBUTTON CENTRAL CONTROL UNIT	CP-2
					433			632	433	FT	SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE	CP-2
					2			633	2	EACH	CONTROLLER ITEM, MISC.: CONTROLLER MODIFICATIONS	CP-2
											INCIDENTALS	
								SPEC	LS		PREMIUMS ON INSURANCE, PERMITS AND BONDS	
LS								SPEC	LS		PRECONSTRUCTION VIDEO TAPING, AS PER PLAN	GN-1
	LS							614	LS		MAINTAINING TRAFFIC	GN-2
LS								623	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	GN-1
								624	LS		MOBILIZATION	

Calculated NDS
Checked CJT

General Summary

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GG-1

Drawing File: O:\2022\2022267\100 - Belmont Ave Sidewalks Phase 1\MITA\Design\Sheets\2022267100gg-1.dwg Layout: GG-1
Date: May 15, 2025 Time: 1:05 pm Tabs: 0
Technician: nshaffer

REF. NO.	SHT. NO.	MAIN ROUTE	INTERSECTION	STATION FROM	STATION TO	SIDE	DISTANCE	AVG. WIDTH	AUTOCAD AREA	202 CONCRETE MEDIAN REMOVED	608 4" CONCRETE WALK	608 CURB RAMP, AS PER PLAN	608 CURB, TYPE 7, AS PER PLAN	611 12" CONDUIT, TYPE B	611 CATCH BASIN, NO. 2-2B	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN	644 CROSSWALK LINE, 12"
							FT	FT	SQ FT	SY	SF	SF	SF	FT	EACH	EACH	FT
BASE BID (EAST SIDE)																	
M-1	GP-1	BELMONT AVE.	I-80	0+22.30	0+35.80	RT.	13.5	2	27	6							
CR-1	GP-1	BELMONT AVE.	I-80	0+10.49		LT.			139			139					
CR-2	GP-1	BELMONT AVE.	I-80	0+24.79		RT.	14.3	5.5	78			78					
SW-10	GP-1	BELMONT AVE.		0+29.79	1+58.53	RT.	130.2	5	651		651						
CR-3	GP-1	BELMONT AVE.	FORTUNE GARDEN	1+58.53		RT.	11.9	5.8	69			69					
CR-4	GP-1	BELMONT AVE.	FORTUNE GARDEN	2+13.71		RT.	10.0	5.8	58			58					
SW-11	GP-1	BELMONT AVE.		02+23.70	03+03.68	RT.	80.0	5	400		400						
CR-5	GP-1	BELMONT AVE.	HANDEL'S	03+03.68		RT.	10.3	5.3	54			54					
CR-6	GP-1	BELMONT AVE.	HANDEL'S	03+59.20		RT.	12.1	5.3	64			64					
SW-12	GP-1	BELMONT AVE.		03+72.75	04+28.69	RT.	55.9	5	280		280						
EX-14	GP-1	BELMONT AVE.		03+86.11		RT.										1	
EX-16	GP-1	BELMONT AVE.		04+07.12		RT.										1	
P-1	GP-1	BELMONT AVE.		04+11.80		RT.								14			
D-1	GP-1	BELMONT AVE.		04+11.80		RT.									1		
CR-7	GP-1	BELMONT AVE.	PERNI LN.	04+28.69		RT.	13.8	5.2	72			72					
CW-10	GP-1	BELMONT AVE.	PERNI LN.	4+36.60	04+75.58	RT.											66
CR-8	GP-1	BELMONT AVE.	PERNI LN.	04+75.52		RT.	6.4	5	32	5		32					
CW-11	GP-1	BELMONT AVE.	PERNI LN.	04+81.83	05+17.02	RT.											66
CR-9	GP-1	BELMONT AVE.	PERNI LN.	05+12.92		RT.	11.9	5.3	63			63					
SW-13	GP-1/GP-2	BELMONT AVE.		05+26.63	06+33.58	RT.	107.0	5	535		535						
CR-10	GP-2	BELMONT AVE.	DUNKIN'	06+33.58		RT.	12.1	5.1	62			62					
CR-11	GP-2	BELMONT AVE.	DUNKIN'	06+61.27		RT.	13.9	5.3	73	19		73					
CR-12	GP-2	BELMONT AVE.	DUNKIN'	06+76.75		RT.	6.9	5.7	39			39					
CR-13	GP-2	BELMONT AVE.	DUNKIN'	06+98.58		RT.	13.0	5.3	69			69					
SW-20	GP-2	BELMONT AVE.		07+13.93	07+89.97	RT.	76.0	5	380		380						
CR-14	GP-2	BELMONT AVE.	VALLEY PARTNERS	07+89.97		RT.	10.7	5	54			54					
CR-15	GP-2	BELMONT AVE.	VALLEY PARTNERS	08+32.52		RT.	11.2	5	56			56					
SW-21	GP-2	BELMONT AVE.		08+44.20	08+79.18	RT.	35.0	5	175		175						
CR-16	GP-2	BELMONT AVE.	CITIZENS BANK	08+79.18		RT.	10.9	5.3	58			58					
CR-17	GP-2	BELMONT AVE.	CITIZENS BANK	09+18.67		RT.	11.1	5.2	58			58					
SW-22	GP-2	BELMONT AVE.		09+30.85	09+91.98	RT.	61.1	5	306		306						
CR-18	GP-2	BELMONT AVE.	CITIZENS BANK	09+91.98		RT.	11.2	5.4	60			60					
CR-19	GP-2	BELMONT AVE.	CITIZENS BANK	10+35.83		RT.	12.2	5.3	65			65					
SW-23	GP-2	BELMONT AVE.		10+46.13	10+97.04	RT.	48.9	5	245		245						
CR-20	GP-2/GP-3	BELMONT AVE.	UNITED METHODIST CHURCH	10+97.04		RT.	10.2	5.3	54			54					
									SUBTOTALS CARRIED TO GS-2	30	2972	1277	0	14	1	2	132

SEE SHEETS CR-1 THRU CR-12 FOR CURB RAMP DIMENSIONS AND DETAILS

Calculated NDS
Checked CJT

Subsummaries

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GS-1

Drawing File: C:\PW\2022\2022267\00 - Belmont Ave Sidewalks Phase 1 (MRTA)\Design\Sheets\2022267100gs-1.dwg Layout: GS-1
Date: May 12, 2025 Time: 11:56 am Twist: 0
Technician: nshaffer

REF. NO.	SHT. NO.	MAIN ROUTE	INTERSECTION	STATION FROM	STATION TO	SIDE	DISTANCE	AVG. WIDTH	AUTOCAD AREA	202 CONCRETE MEDIAN REMOVED	608 4" CONCRETE WALK	608 CURB RAMP, AS PER PLAN	608 CURB, TYPE 7, AS PER PLAN	611 12" CONDUIT, TYPE B	611 CATCH BASIN, NO. 2-2B	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN	644 CROSSWALK LINE, 12"
				FROM	TO		FT	FT	SQ FT	SY	SF	SF	SF	FT	EACH	EACH	FT
BASE BID (EAST SIDE)																	
CR-21	GP-3	BELMONT AVE.	UNITED METHODIST CHURCH	11+28.63		RT.	8.3	5.5	46	14		46					
CR-22	GP-3	BELMONT AVE.	STERNE AGEE	11+37.73		RT.	8.3	5.5	46			46					
CR-23	GP-3	BELMONT AVE.	STERNE AGEE	11+73.42		RT.	11.1	5.2	58			58					
C-1	GP-3	BELMONT AVE.		11+75.13	13+06.70	RT.	136.0						136				
SW-30	GP-3	BELMONT AVE.		11+84.97	12+95.63	RT.	114.8	5	574		574						
CR-24	GP-3	BELMONT AVE.	PNC BANK	12+95.63		RT.	10.8	5.2	56			56					
CR-25	GP-3	BELMONT AVE.	PNC BANK	13+42.07		RT.	10.2	5.2	53			53					
SW-31	GP-3	BELMONT AVE.		13+52.28	15+09.06	RT.	159.5	5	798		798						
C-2	GP-3	BELMONT AVE.		14+85.82	15+35.56	RT.	65.0						65				
CR-26	GP-3	BELMONT AVE.	CHURCHILL RD.	15+09.06		RT.	18.8	5.7	107			107					
SUBTOTALS										14	1372	366	201	0	0	0	0
SUBTOTALS CARRIED FROM SHEET GS-1										30	2972	1277	0	14	1	2	132
EAST SIDE SUBTOTALS										44	4344	1643	201	14	1	2	132
BASE BID (WEST SIDE)																	
CR-40	GP-4	BELMONT AVE.	CHURCHILL PARK DRIVE	04+95.27		LT.	12.0	5.3	64			64					
SW-40	GP-4	BELMONT AVE.		05+09.04	05+58.95	LT.	49.9	5	250		250						
CR-41	GP-4	BELMONT AVE.	CHURCHILL PARK PLAZA	05+58.95		LT.	11.3	5.2	59			59					
CR-42	GP-4	BELMONT AVE.	CHURCHILL PARK PLAZA	05+94.70		LT.	10.8	5.3	57			57					
SW-41	GP-4	BELMONT AVE.		06+06.06	07+30.61	LT.	125	5	623		623						
CR-43	GP-4	BELMONT AVE.	CHURCHILL PARK PLAZA	07+30.61		LT.	10.2	5.3	54			54					
CR-44	GP-4	BELMONT AVE.	CHURCHILL PARK PLAZA	08+16.38		LT.	10.0	5.3	53			53					
SW-42	GP-4	BELMONT AVE.		08+26.51	08+59.13	LT.	32.6	5	163		163						
CR-45	GP-4	BELMONT AVE.	HAMPTON INN	08+59.13		LT.	12.5	5.4	67			67					
CR-46	GP-4	BELMONT AVE.	HAMPTON INN	09+06.34		LT.	12.6	5.5	69			69					
WEST SIDE SUBTOTALS										0	1036	423	0	0	0	0	0
SUBTOTALS CARRIED TO GENERAL SUMMARY										44	5380	2066	201	14	1	2	132

SEE SHEETS CR-1 THRU CR-12 FOR CURB RAMP DIMENSIONS AND DETAILS

Calculated NDS
Checked CJT

Subsummaries

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GS-2

Drawing File: O:\B2022\B2022261\B00 - Belmont Ave Sidewalks Phase 1\WRTA\Design\Sheets\B2022261700gg-1.dwg Layout: GS-2
Date: May 12, 2025 Time: 11:56 am Twist: 0
Technician: nshaffer

SHT. NO.	203 EXCAVATION (CROSS SECTION SHEET LEFT COLUMN)	203 EXCAVATION (CROSS SECTION SHEET RIGHT COLUMN)	203 EMBANKMENT (CROSS SECTION SHEET LEFT COLUMN)	203 EMBANKMENT (CROSS SECTION SHEET RIGHT COLUMN)
	CY	CY	CY	CY
XS-1	0	5	0	5
XS-2	5	0	3	6
XS-3	0	0	6	7
XS-4	10	2	15	9
XS-5	2	0	1	0
SUBTOTALS	17	7	25	27
TOTALS CARRIED TO GENERAL SUMMARY	24		52	

Calculated NDS
Checked CJT

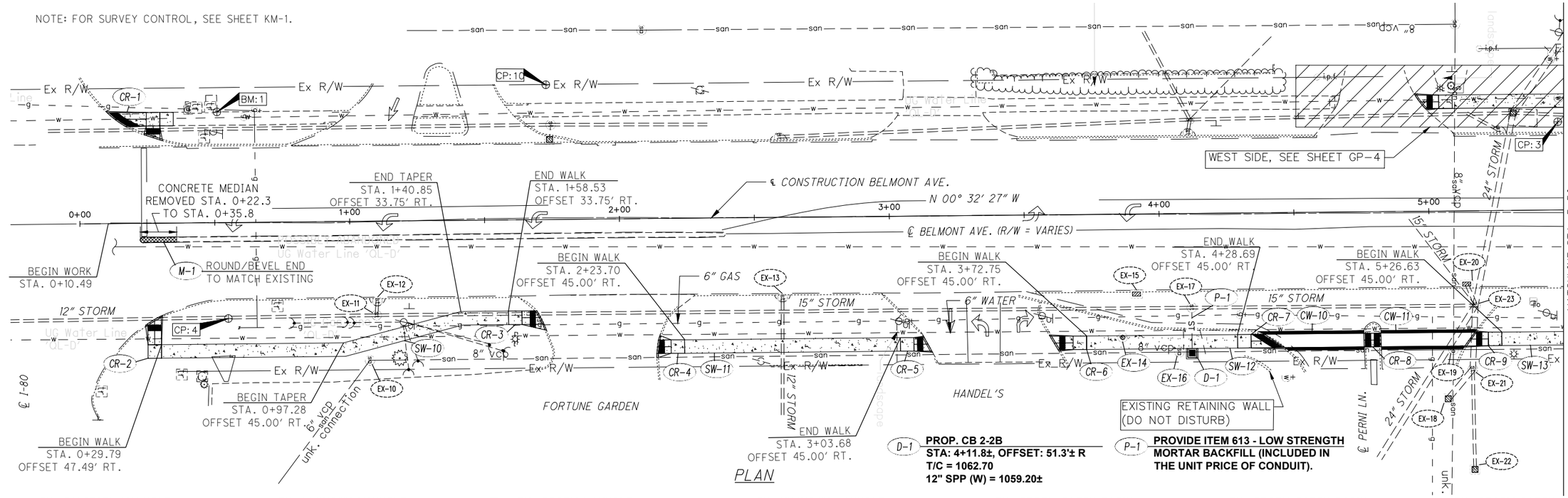
Subsummaries

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GS-3

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1\INRTA\Design\Sheets\2022267100gs-1.dwg Layout: GS-3
Date: May 12, 2025 Time: 11:51:1 am Twist: 0
Technician: nshaffer

NOTE: FOR SURVEY CONTROL, SEE SHEET KM-1.



PLAN

EX-10 EX. SANITARY MANHOLE
(TO REMAIN)
STA: 1+07.0±, OFFSET: 51.5'± R
T/C = 1072.59
8" VCP (N) = 1064.09±
6" VCP (SE) = 1064.64±

EX-11 EX. UNKNOWN MANHOLE
(TO REMAIN)
STA: 1+09.6±, OFFSET: 34.8'± R
T/C = 1071.90
12" RCP (N) = 1067.50±
12" RCP (S) = 1067.50±
12" RCP (SW) = 1068.00±

EX-12 EX. UNKNOWN MANHOLE
(TO REMAIN)
STA: 1+10.0±, OFFSET: 29.3'± R
T/C = 1071.81
12" RCP (N) = 1068.46±

EX-13 EX. STORM MANHOLE
(TO REMAIN)
STA: 2+60.2±, OFFSET: 29.8'± R
T/C = 1067.61
12" RCP (E) = 1063.01±

EX-14 EX. STORM MANHOLE
(ADJUST TO GRADE)
STA: 3+86.1±, OFFSET: 45.7'± R
T/C = 1062.13
UNKNOWN = 1062.13±

EX-15 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 3+91.4±, OFFSET: 29.7'± R
T/C = 1062.25
12" RCP (NE) = 1059.00±

EX-16 EX. UNKNOWN MANHOLE
(ADJUST TO GRADE)
STA: 4+07.1±, OFFSET: 51.3'± R
T/C = 1063.65
8" VCP (N) = 1053.45±
8" VCP (S) = 1053.45±

EX-17 EX. STORM MANHOLE
(TO REMAIN)
STA: 4+11.8±, OFFSET: 34.9'± R
T/C = 1061.50
15" RCP (N) = 1057.80±
15" RCP (S) = 1057.80±
12" SPP (E) = 1057.20 ±

EX-18 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 5+06.6±, OFFSET: 69.5'± R
T/C = 1059.21

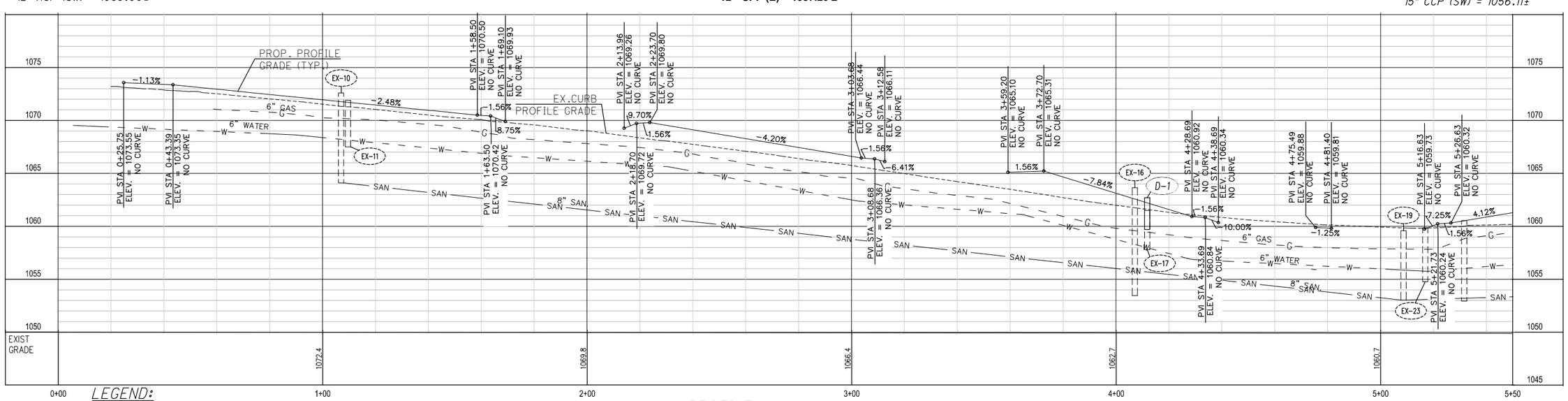
EX-19 EX. SANITARY MANHOLE
(TO REMAIN)
STA: 5+08.7±, OFFSET: 51.4'± R
T/C = 1059.58
8" VCP (N) = 1053.13±
8" VCP (S) = 1053.13±
8" VCP (W) = 1053.03±
8" VCP (E) = 1053.73±

EX-20 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 5+13.8±, OFFSET: 27.1'± R
T/C = 1059.83
15" CCP (NE) = 1056.23±

EX-21 EX. STORM MANHOLE
(TO REMAIN)
STA: 5+15.8±, OFFSET: 58.7'± R
T/C = 1061.67
24" RCP (NW) = 1055.42±
24" RCP (SE) = 1055.42±
12" CCP (SE) = 1055.82±

EX-22 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 5+16.4±, OFFSET: 95.7'± R
T/C = 1063.24

EX-23 EX. STORM MANHOLE
(TO REMAIN)
STA: 5+16.9±, OFFSET: 35.1'± R
T/C = 1059.86
24" RCP (NW) = 1054.76±
24" RCP (SE) = 1055.11±
15" RCP (S) = 1055.81±
8" SPP (SW) = 1056.16±
15" CCP (SW) = 1056.11±



PROFILE

LEGEND:

ITEM 608 CONCRETE WALK

CROSSWALK STRIPING

WEST SIDE (SEE GP-4)

ITEM 202 CONCRETE MEDIAN REMOVED

Plan and Profile
Sta. 0+00 to Sta. 5+50

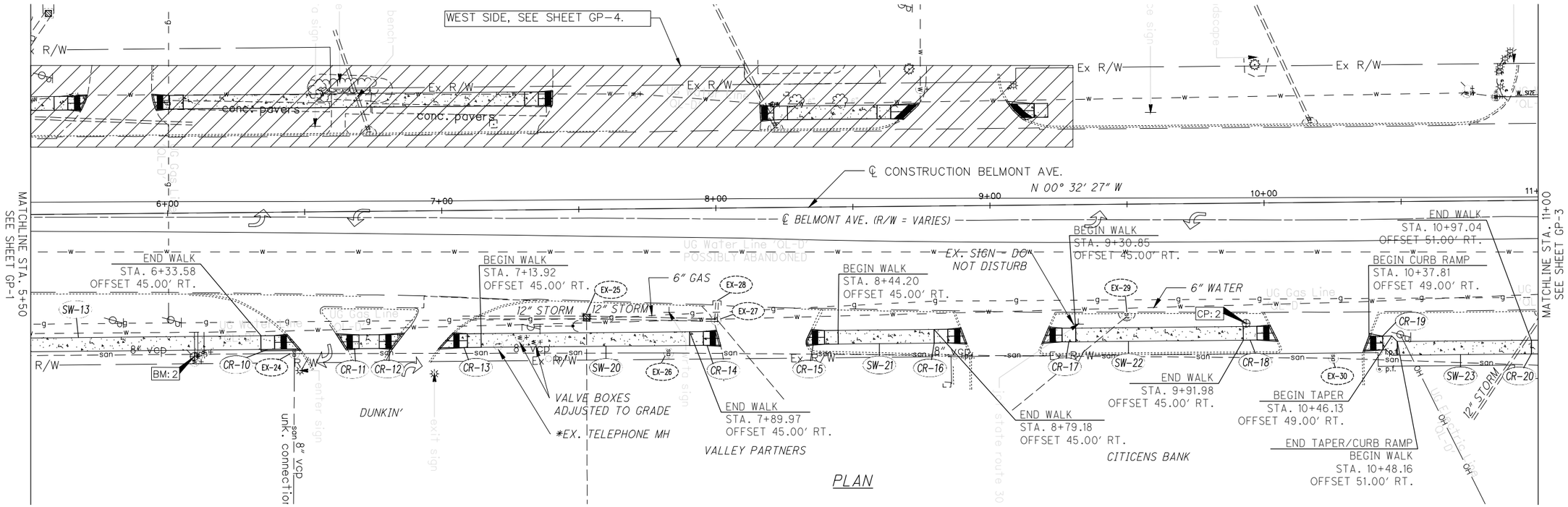
Horizontal Scale in Feet
0 10 20 40

Calculated NDS
Checked CJT

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GP-1

Drawing File: O:\2022\2022287100 - Belmont Ave Sidewalks Phase I (WRTA)\Design\Sheets\2022287100gp-1.dwg Layout: GP-1
Date: Apr 04, 2025 Time: 15:1 pm Twist: -1.57079633
Technician: nshaffer



EX-24 *EX. SANITARY MANHOLE*
(TO REMAIN)
STA: 6+45.8±, OFFSET: 51.6'± R
T/C = 1059.86
8" VCP (N) = 1054.09±
8" VCP (S) = 1054.09±
8" VCP (E) = 1054.64±

EX-25 *EX. STORM CATCH BASIN*
(TO REMAIN)
STA: 7+52.5±, OFFSET: 39.4'± R
T/C = 1063.71
12" RCP (N) = 1060.11±
12" RCP (S) = 1060.11±
4" SPP (E) = 1062.21±

EX-26 *EX. SANITARY MANHOLE*
(TO REMAIN)
STA: 7+82.3±, OFFSET: 52.7'± R
T/C = 1066.17
8" VCP (N) = 1055.22±
8" VCP (S) = 1055.22±

EX-27 *EX. STORM MANHOLE*
(TO REMAIN)
STA: 7+99.7±, OFFSET: 40.9'± R
T/C = 1066.17
12" CCP (W) = 1061.12±
6" SPP (NE) = 1062.87±
12" RCP (S) = 1060.77±

EX-28 *EX. STORM CATCH BASIN*
(TO REMAIN)
STA: 8+00.1±, OFFSET: 34.6'± R
T/C = 1064.56
12" CCP (E) = 1061.46±

EX-29 *EX. STORM MANHOLE*
(TO REMAIN)
STA: 9+49.5±, OFFSET: 40.9'± R
T/C = 1066.05
8" VCP (N) = 1064.20±

EX-30 *EX. SANITARY MANHOLE*
(TO REMAIN)
STA: 10+24.8±, OFFSET: 56.9'± R
T/C = 1066.32
8" VCP (N) = 1057.37±
8" VCP (S) = 1057.37±

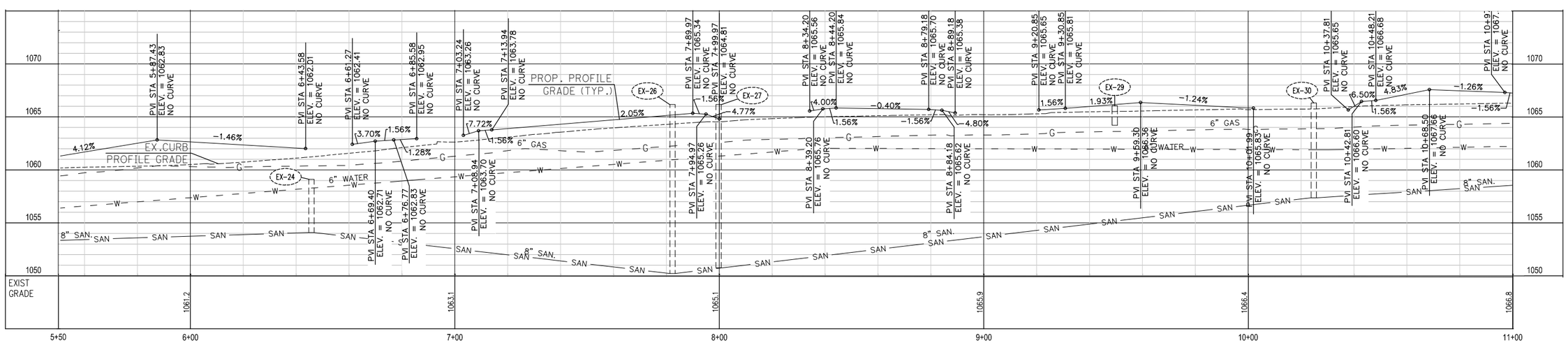
LEGEND:

ITEM 608 CONCRETE WALK

WEST SIDE (SEE GP-4)

*TELEPHONE MANHOLE TO REMAIN, SLOPE OF THE SIDEWALK TO MEET THE EXISTING TOP OF CAST ELEVATION.

NOTE: FOR SURVEY CONTROL, SEE SHEET KM-1.



PROFILE

Drawing File: O:\2022\2022278100 - Belmont Ave Sidewalks Phase 1 (MRTA)\Design\Sheets\2022278100gp-1.dwg Layout: GP-2
Date: May 09, 2025 Time: 1:59 am Twist: -1.57079633
Technician: nshaffer

N

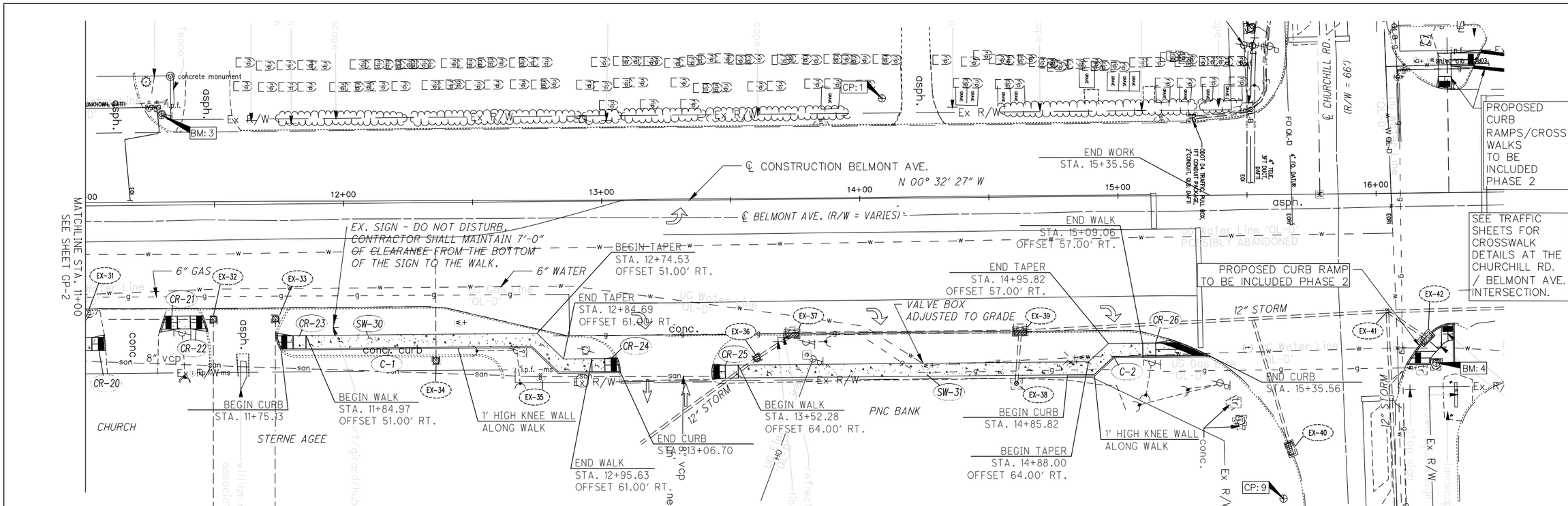
Horizontal Scale in Feet: 0 10 20 40

Calculated NDS
Checked CJT

Plan and Profile
Sta. 5+50 to Sta. 11+00

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GP-2



PLAN

EX-31 EX. STORM MANHOLE
(TO REMAIN)
STA: 11+01.2±, OFFSET: 41.5'± R
T/C = 1066.83
12" RCP (SE) = 1062.73±

EX-32 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 11+49.2±, OFFSET: 44.4'± R
T/C = 1066.60
8" SPP (E) = 1064.25±
8" SPP (S) = 1064.60±

EX-33 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 11+73.2±, OFFSET: 44.4'± R
T/C = 1066.62
8" SPP (E) = 1064.27±

EX-34 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 12+35.3±, OFFSET: 61.1'± R
T/C = 1069.55
8" SPP (W) = 1067.20±

EX-35 EX. SANITARY MANHOLE
(TO REMAIN)
STA: 12+75.7±, OFFSET: 67.8'± R
T/C = 1070.59
8" VCP (N) = 1061.29±
8" VCP (S) = 1061.29±

EX-36 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 13+59.6±, OFFSET: 61.3'± R
T/C = 1067.14
12" CPP (NW) = 1065.34±
12" CPP (SE) = 1065.39±

EX-37 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 13+73.3±, OFFSET: 52.1'± R
T/C = 1065.52
12" CPP (N) = 1061.32±
12" CPP (SE) = 1061.32±

EX-38 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 14+60.0±, OFFSET: 72.1'± R
T/C = 1065.39
12" RCP (NW) = 1063.39±
12" RCP (SE) = 1063.39±

EX-39 EX. STORM CURB INLET
(TO REMAIN)
STA: 14+61.6±, OFFSET: 52.0'± R
T/C = 1064.37
12" CPP (N) = 1058.62±
12" CPP (E) = 1062.12±
12" RCP (S) = 1058.67±

EX-40 EX. STORM CURB INLET
(TO REMAIN)
STA: 15+66.1±, OFFSET: 98.4'± R
T/C = 1061.54
12" RCP (SW) = 1057.34±

EX-41 EX. STORM MANHOLE
(TO REMAIN)
STA: 16+03.8±, OFFSET: 45.6'± R
T/C = 1061.84
12" RCP (N) = 1055.09±
12" VCP (NE) = 1058.04±
12" RCP (E) = 1055.44±
12" RCP (S) = 1055.39±

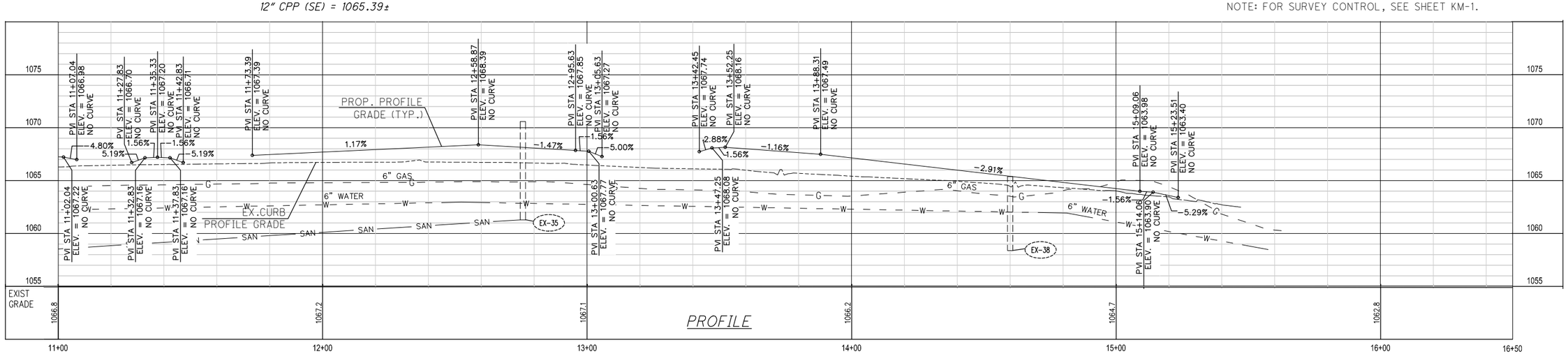
EX-42 EX. STORM CURB INLET
(TO REMAIN)
STA: 16+18.7±, OFFSET: 56.1'± R
T/C = 1061.08
12" VCP (SW) = 1058.68±

LEGEND:

ITEM 608 CONCRETE WALK

RIP — GRAVE MARKER

NOTE: FOR SURVEY CONTROL, SEE SHEET KM-1.



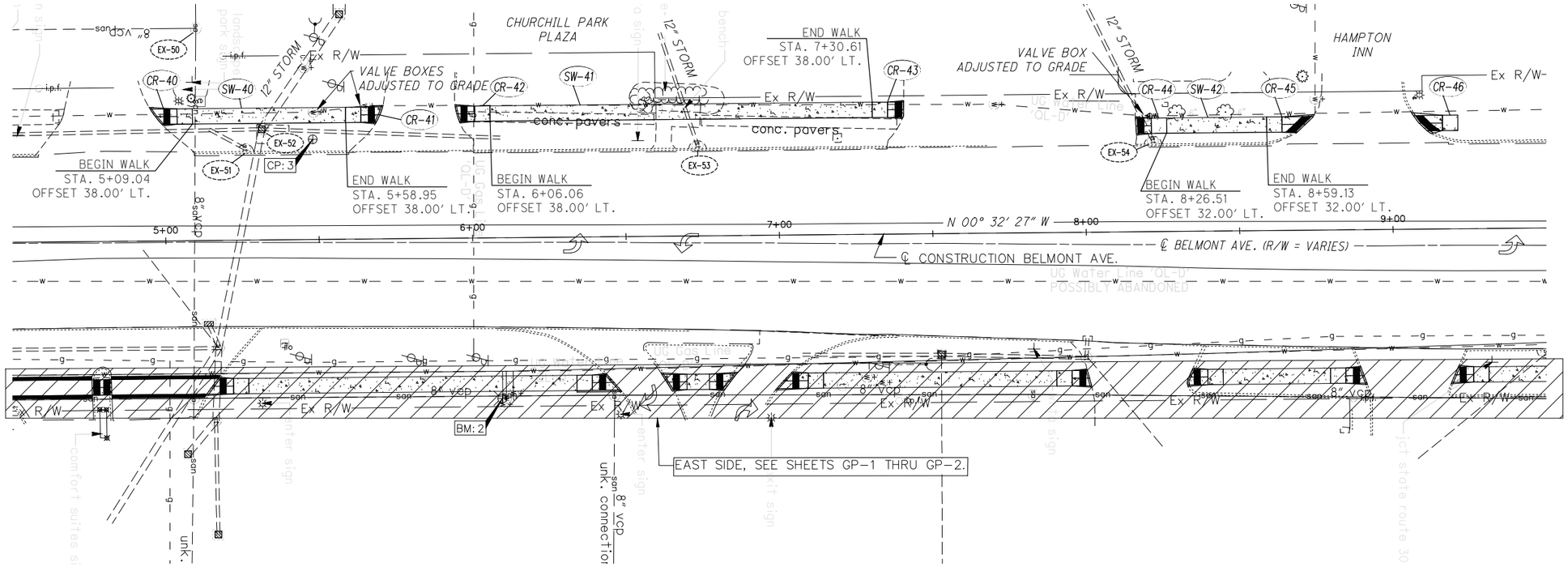
PROFILE

Drawing File: O:\2022\2022287100 - Belmont Ave Sidewalks Phase 1\MKTA\Design\Sheets\2022287100gp-1.dwg Layout: GP-3
Date: May 15, 2025 Time: 1:10 pm Twist: -1.5707963
Technician: nshaffer

Plan and Profile
Sta. 11+00 to Sta. 16+50

Liberty Township
Belmont Avenue Sidewalks
Phase 1

GP-3



PLAN

EX-50 EX. SANITARY MANHOLE
(TO REMAIN)
STA: 5+10.4±, OFFSET: 69.2'± L
T/C = 1058.68
8" VCP (E) = 1050.63±
8" VCP (S) = 1052.23±
8" SSP (W) = 1050.63±

EX-51 EX. STORM MANHOLE
(TO REMAIN)
STA: 5+26.3±, OFFSET: 29.7'± L
T/C = 1060.46
12" RCP (SW) = 1057.26±
ASSUMED BLIND TIE

EX-52 EX. STORM CATCH BASIN
(TO REMAIN)
STA: 5+31.6±, OFFSET: 35.6'± L
T/C = 1060.53
12" RCP (N) = 1052.93±
24" CCP (SE) = 1052.93±
24" CCP (SE) = 1052.93±
30" CCP (NW) = 1052.93±
30" CCP (NW) = 1052.93±
12" RCP (S) = 1056.48±
12" RCP (S) = 1056.48±

EX-53 EX. STORM MANHOLE
(TO REMAIN)
STA: 6+73.6±, OFFSET: 28.5'± L
T/C = 1062.42
12" RCP (SW) = 1058.92±

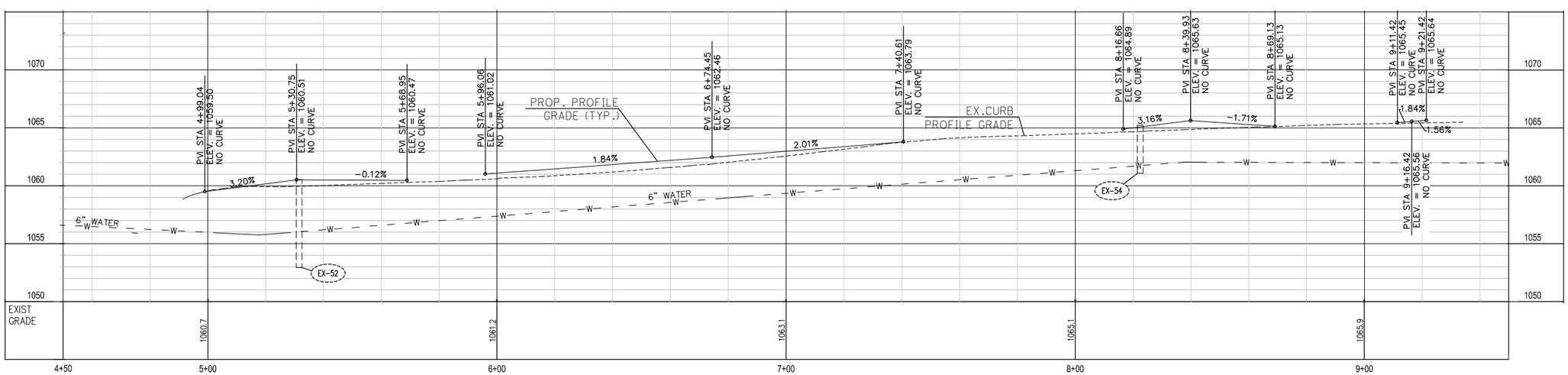
EX-54 EX. STORM MANHOLE
(TO REMAIN)
STA: 8+22.5±, OFFSET: 29.8'± R
T/C = 1065.22
12" RCP (SW) = 1061.07±

LEGEND:

ITEM 608 CONCRETE WALK

EAST SIDE (SEE SHEETS GP-1 THRU GP-2)

NOTE: FOR SURVEY CONTROL, SEE SHEET KM-1.



PROFILE

Plan and Profile
Sta. 4+50 to Sta. 9+50

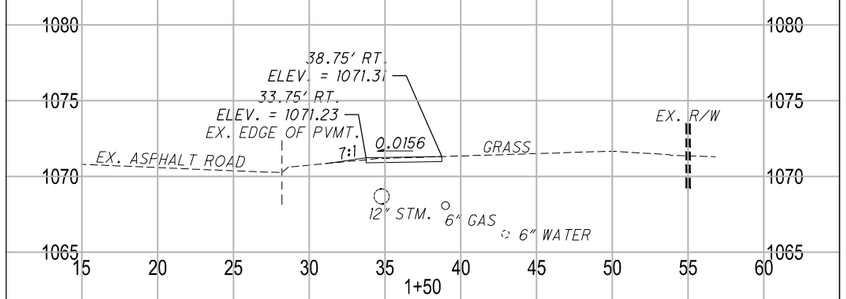
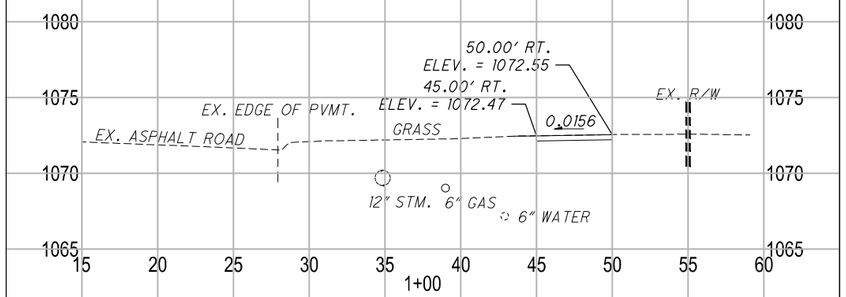
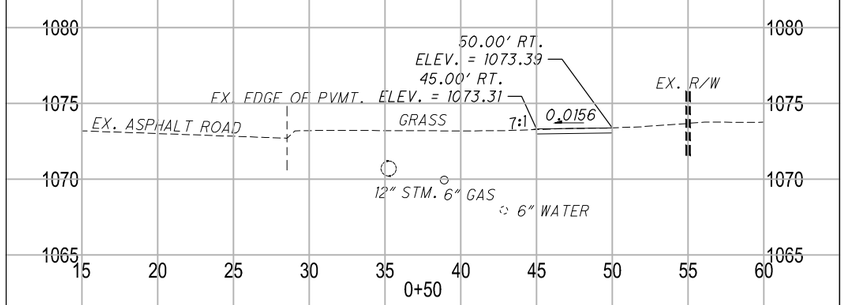
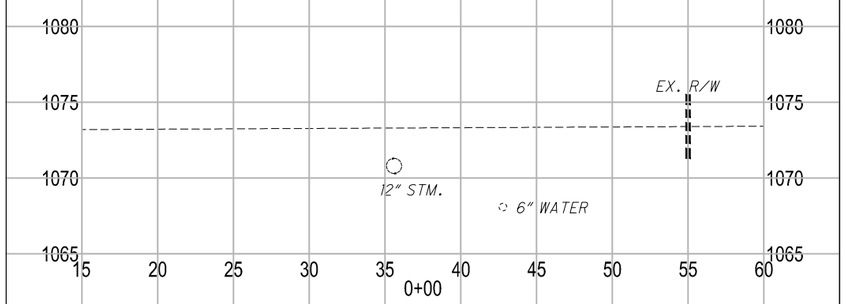
Liberty Township
Belmont Avenue Sidewalks
Phase 1

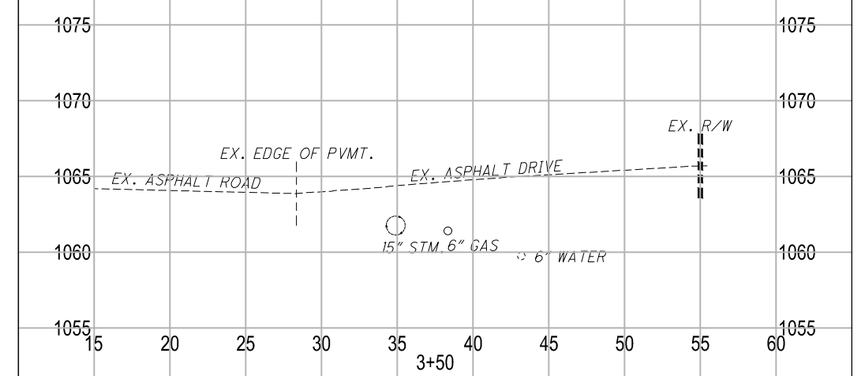
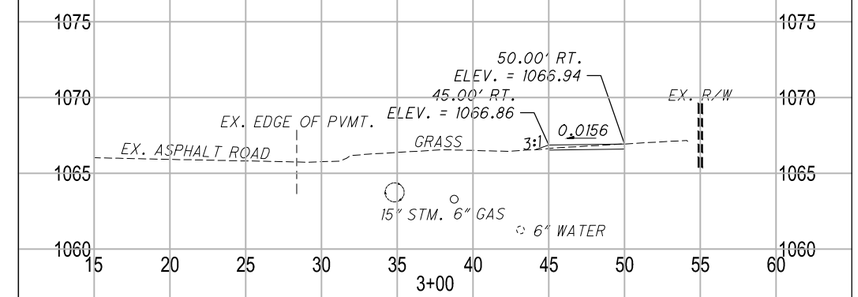
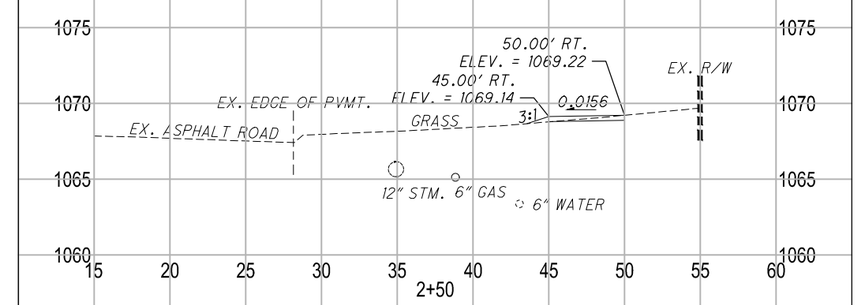
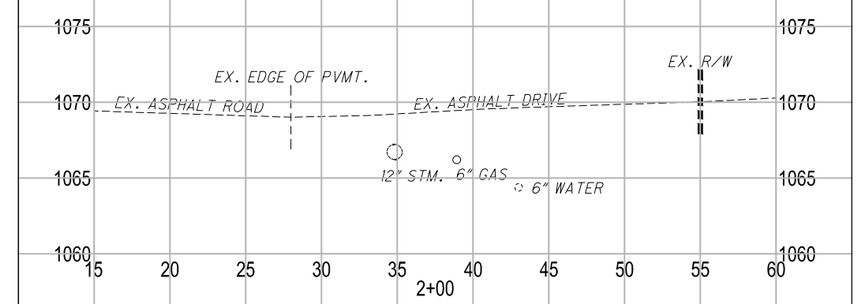
GP-4

Calculated NDS
Checked CJT

Horizontal Scale in Feet
0 10 20 40

Drawing File: O:\2022\2022267\100 - Belmont Ave Sidewalks Phase 1 (MRTIA)\Design\Sheets\2022267100gp-1.dwg Layout: GP-4
Date: May 15, 2025 Time: 1:14 pm Twist: -1.57079633
Technician: nshaffer

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
					0	0
			0	0		
					0	0
			0	0		
					0	0
			0	0		
		BEGIN PROJECT – STA. 0+10.49				
						
			0	0		
					0	0

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
					5	1
			0	0		
					0	1
			0	1		
					0	2
			0	1		
					0	1
			0	0		
					5	5

Calculated NDS

Checked CJT

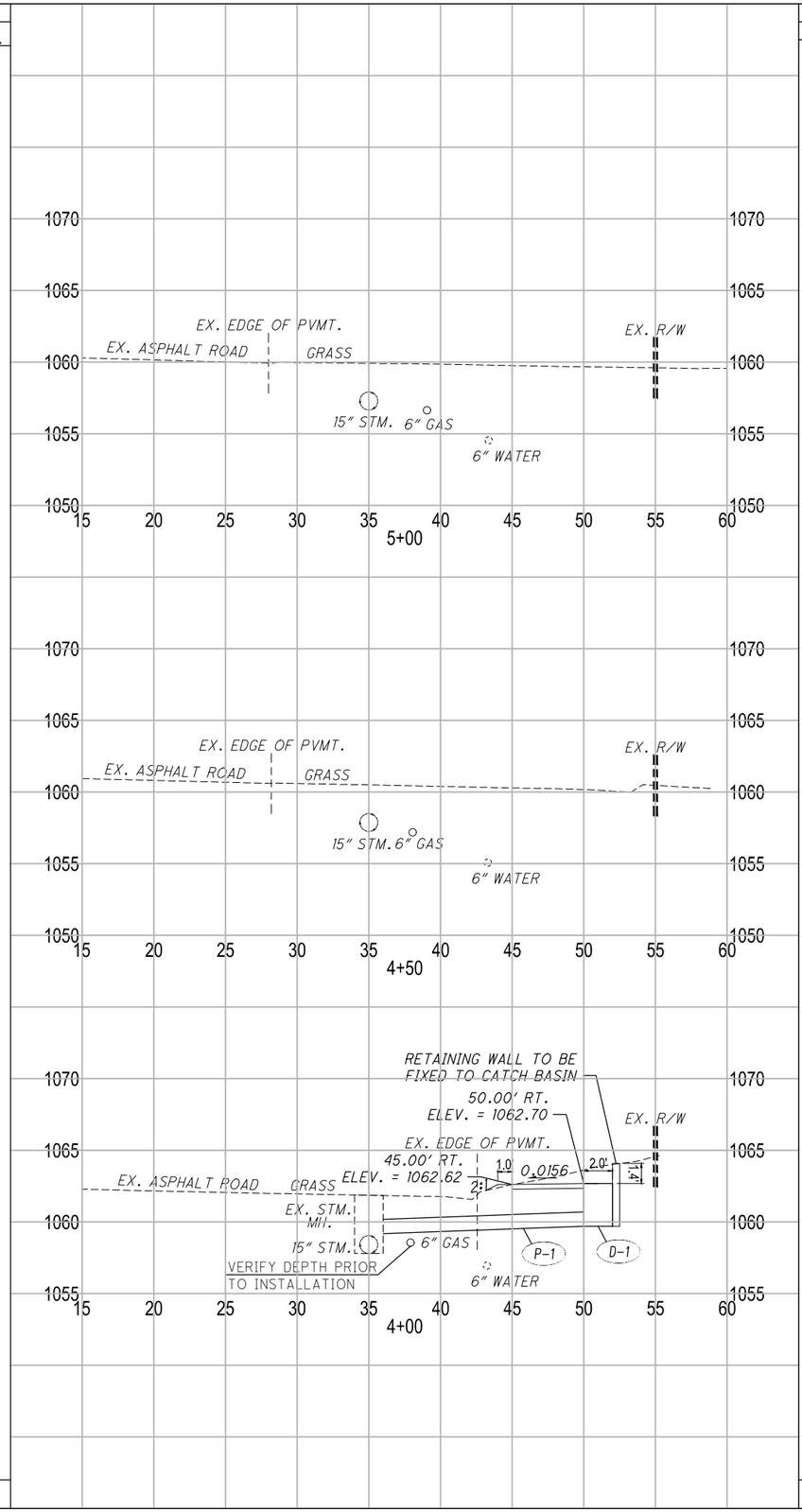
CROSS SECTIONS
STA. 0+00 TO STA. 3+50

Liberty Township
Belmont Avenue Sidewalks
Phase 1

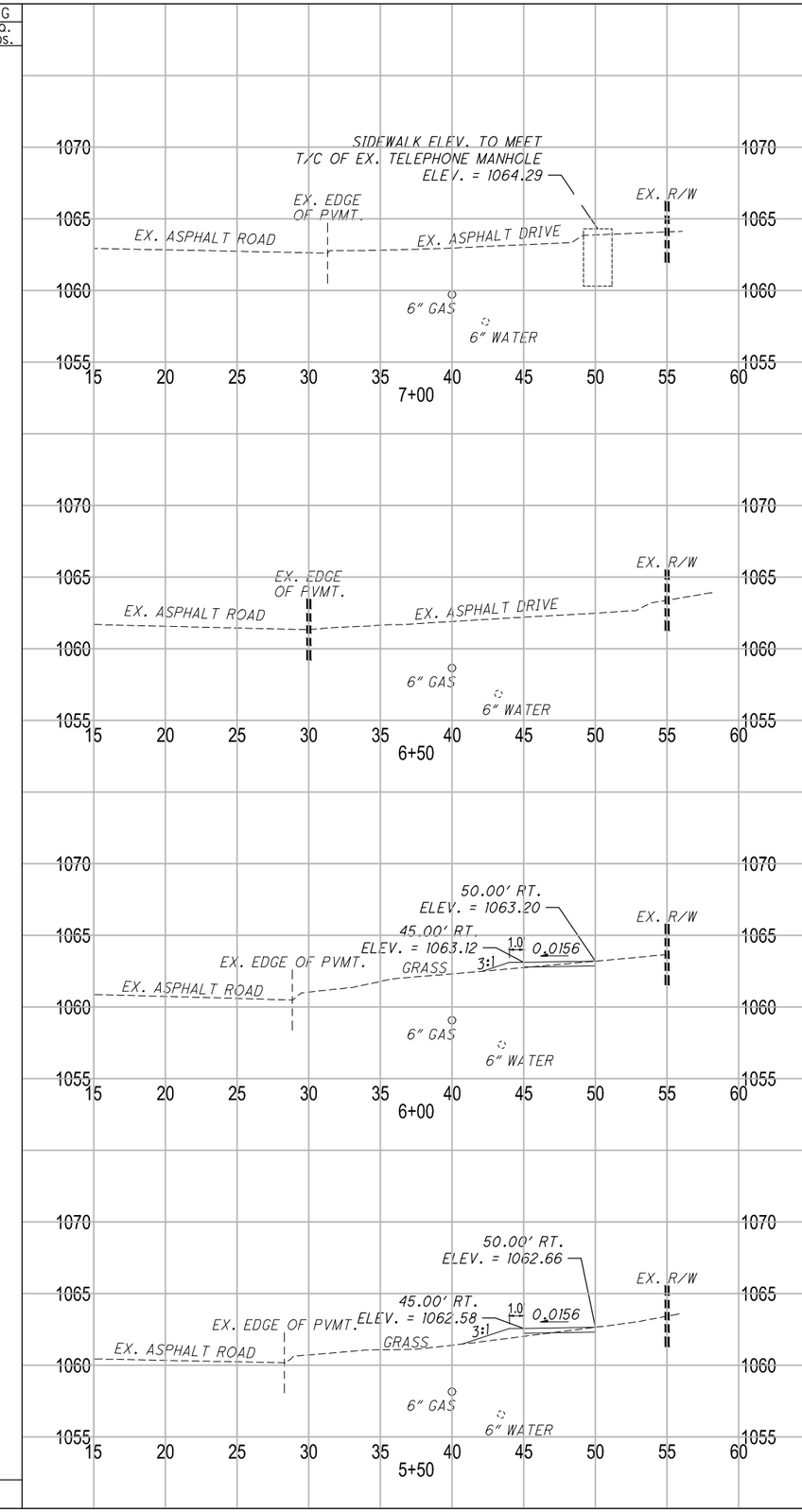
XS–1

Drawing File: O:\2022\2022287\00 - Belmont Ave Sidewalks Phase 1\WRTA\Design\Sheets\2022287\00xs-1.dwg Layout: XS-1
Date: Jan 28, 2025 Time: 9:15 am Twist: -1.37079633
Technician: nshaffer

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
				0	2
		0	0		
				0	0
		0	0		
				5	1
		5	1		
				5	3



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
				0	2
		0	0		
				0	0
		0	0		
				0	1
		0	1		
				0	3
		0	2		
				0	6



Calculated NDS
Checked CJT

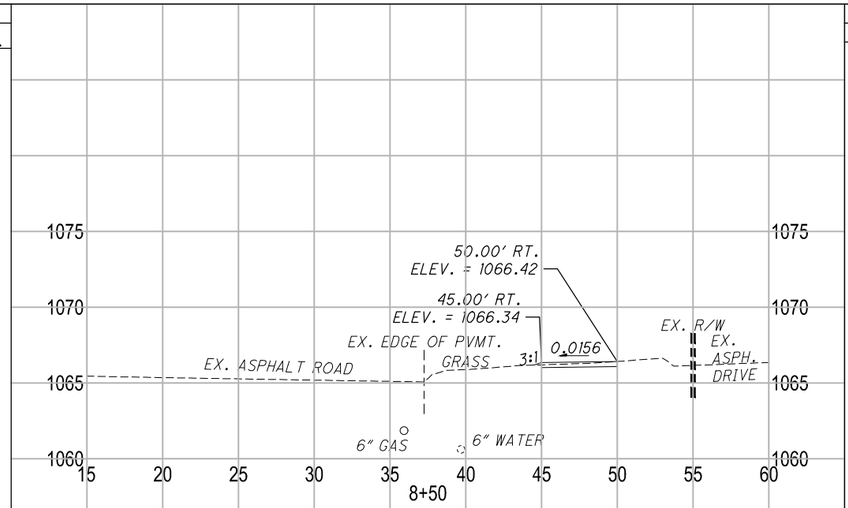
CROSS SECTIONS
STA. 4+00 TO STA. 7+00

Liberty Township
Belmont Avenue Sidewalks
Phase 1

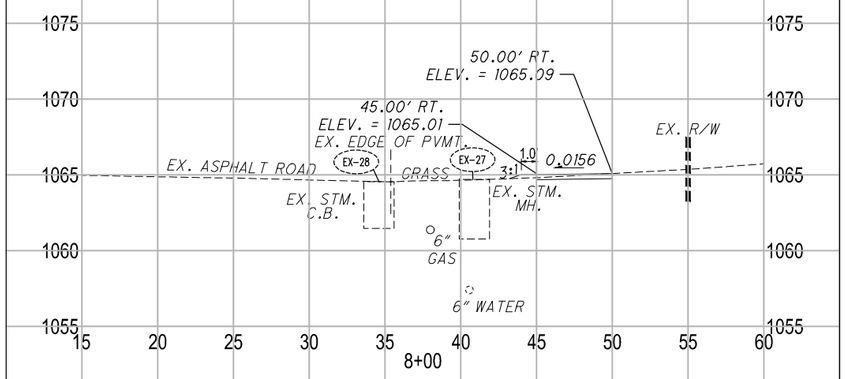
XS-2

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1\RITA\Design\Sheets\2022267\0xs-1.dwg Layout: XS-2
Date: Apr 04, 2025 Time: 2:29 pm Twist: -1.57079633
Technician: nshaffer

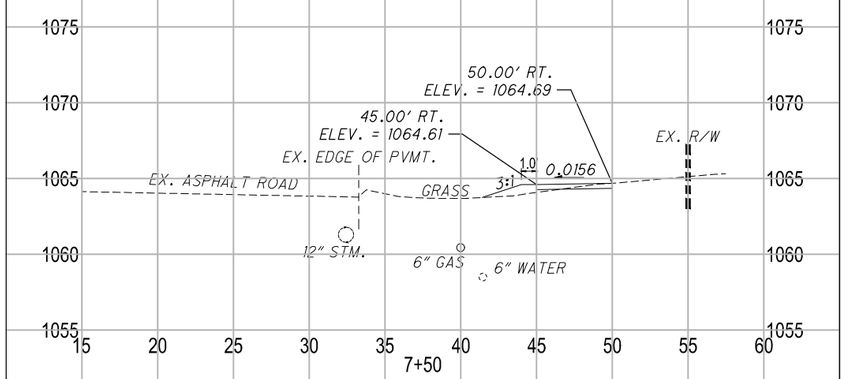
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
				0	1



		0	1	0	2

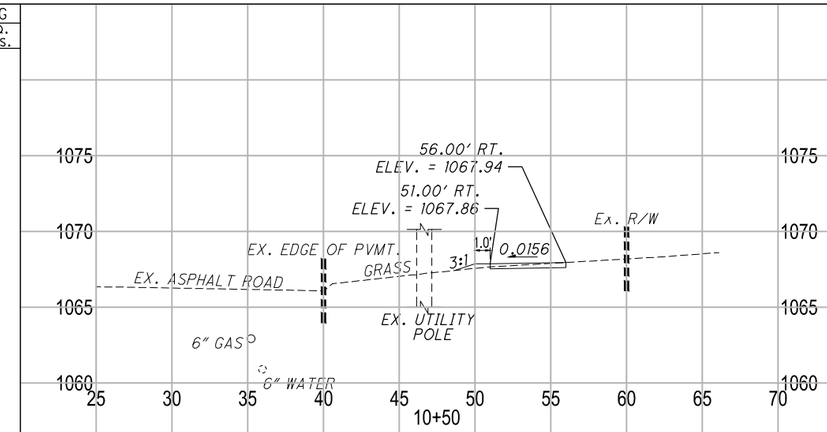


		0	1	0	3

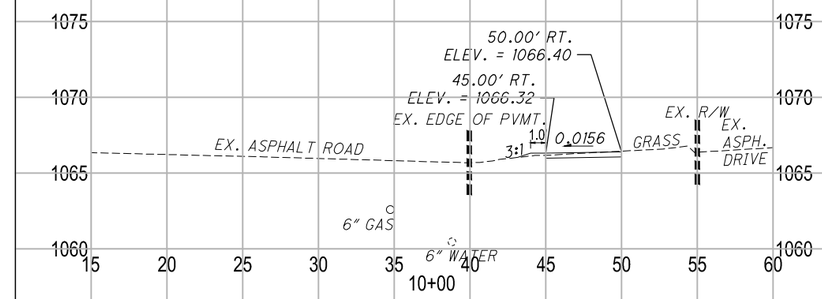


		0	2	0	6

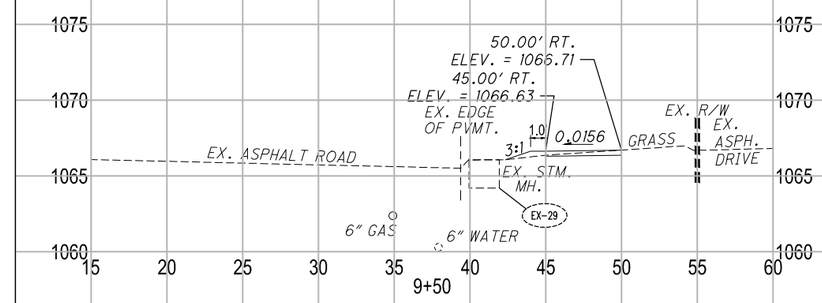
SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
				0	2



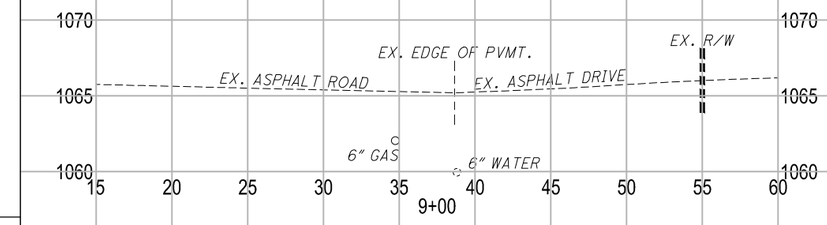
		0	1	0	2



		0	1	0	2



		0	1	0	1



		0	0	0	7

Calculated NDS
Checked CJT

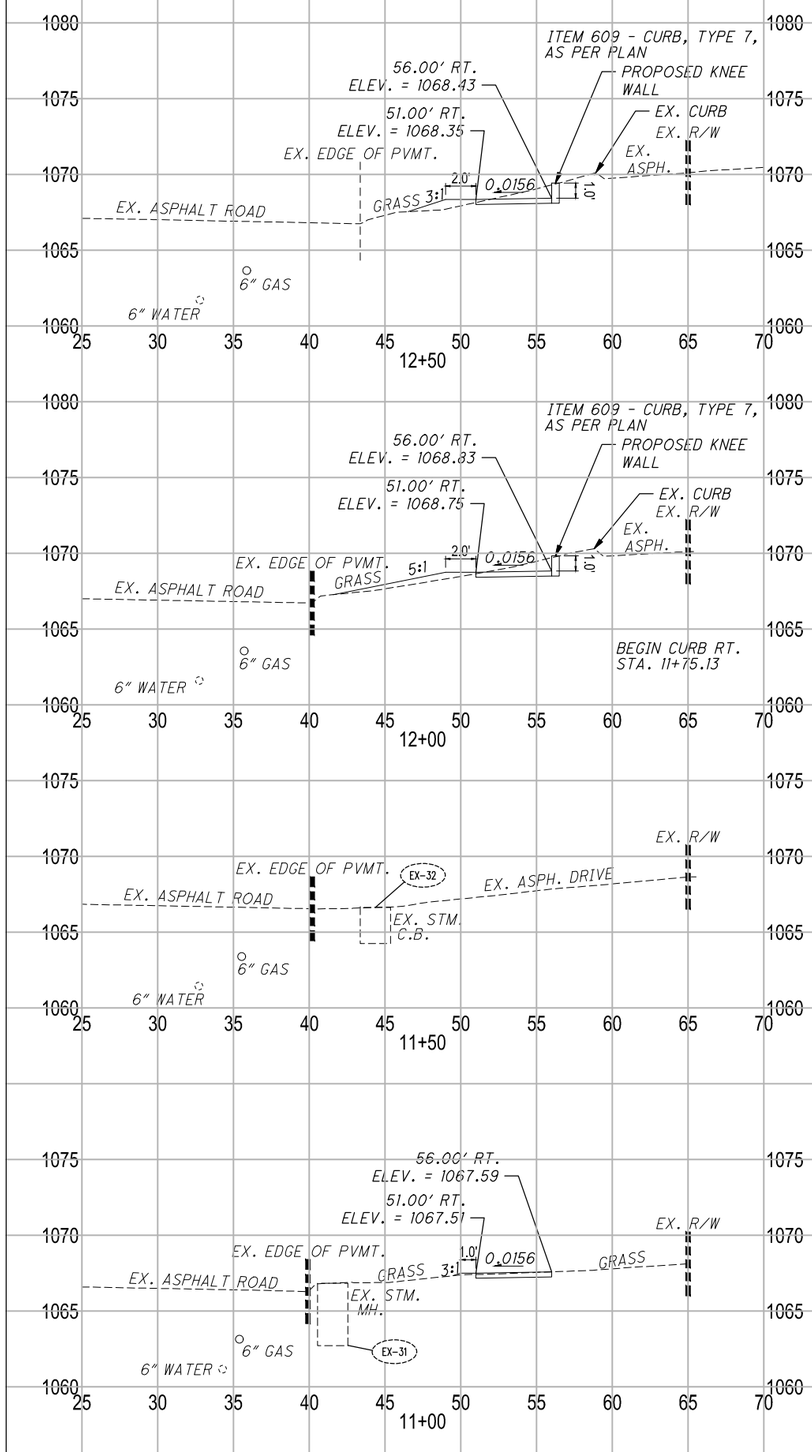
CROSS SECTIONS
STA. 7+50 TO STA. 10+50

Liberty Township
Belmont Avenue Sidewalks
Phase 1

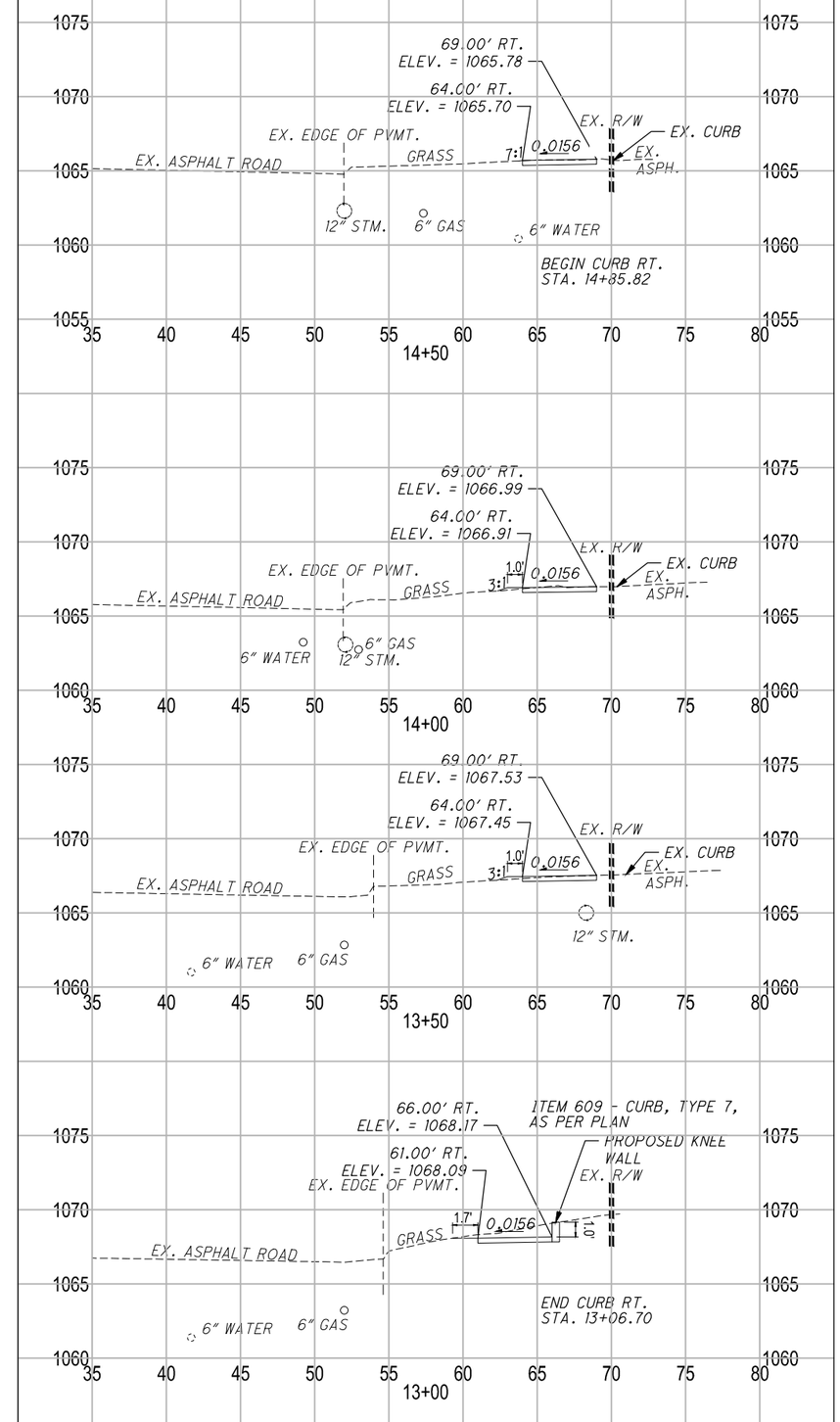
XS-3

Drawing File: O:\2022\2022267100 - Belmont Ave Sidewalks Phase 1\WRTA\Design\Sheets\2022267100s-1.dwg Layout: XS-3
Date: Feb 07, 2024 Time: 2:36 pm Texas: -1.57078633
Technician: nshaffer

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		12+50	2	2	2	6
		12+00	3	3	5	5
		11+50	0	0	3	3
		11+00	0	1	0	1
		Totals			10	15



SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
		14+50	0	0	0	1
		14+00	1	1	1	1
		13+50	0	1	1	2
		13+00	0	4	0	5
		Totals			2	9



Calculated NDS
Checked CJT

CROSS SECTIONS
STA. 11+00 TO STA. 14+50

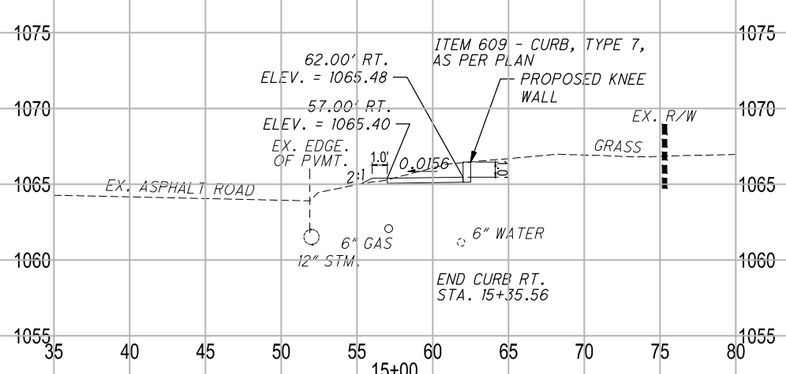
Liberty Township
Belmont Avenue Sidewalks
Phase 1

XS-4

Drawing File: O:\2022\2022087\00 - Belmont Ave Sidewalks Phase 1 (WRFA)\Design\Sheets\2022087\0xs-1.dwg Layout: XS-4
Date: Jan 28, 2025 Time: 9:33 am Twist: -1.5707963
Technician: nshaffer

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
		0	0		
		3	1	2	1
				2	1

END WORK – STA. 15+35.56



SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

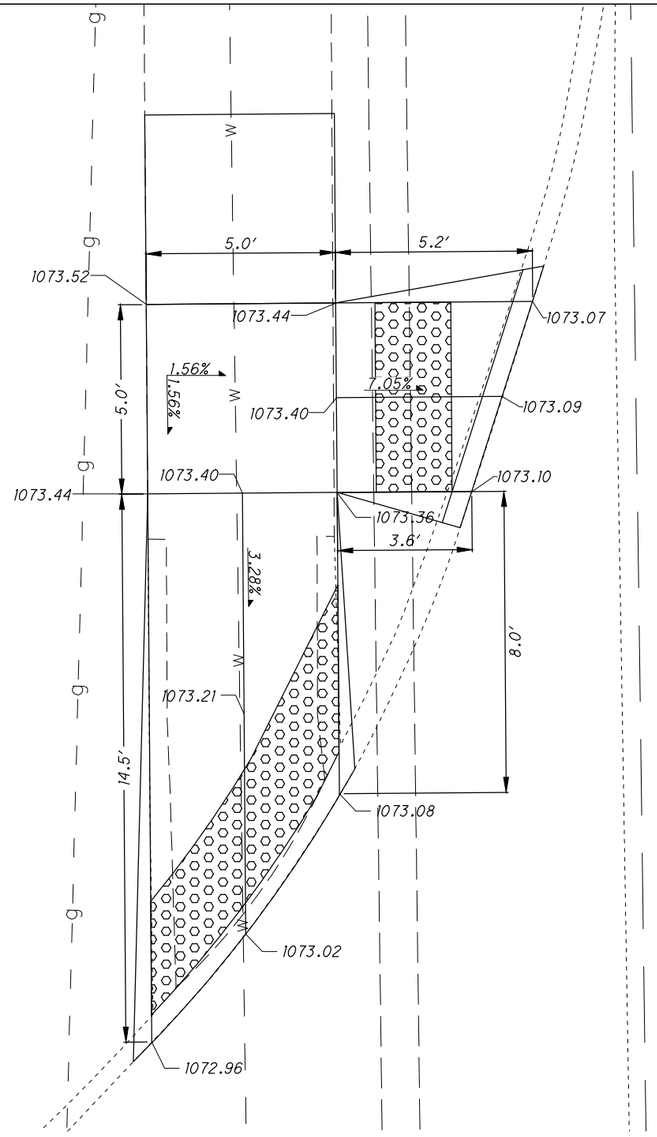
Calculated NDS
Checked CJT

CROSS SECTIONS
STA. 15+00 TO END

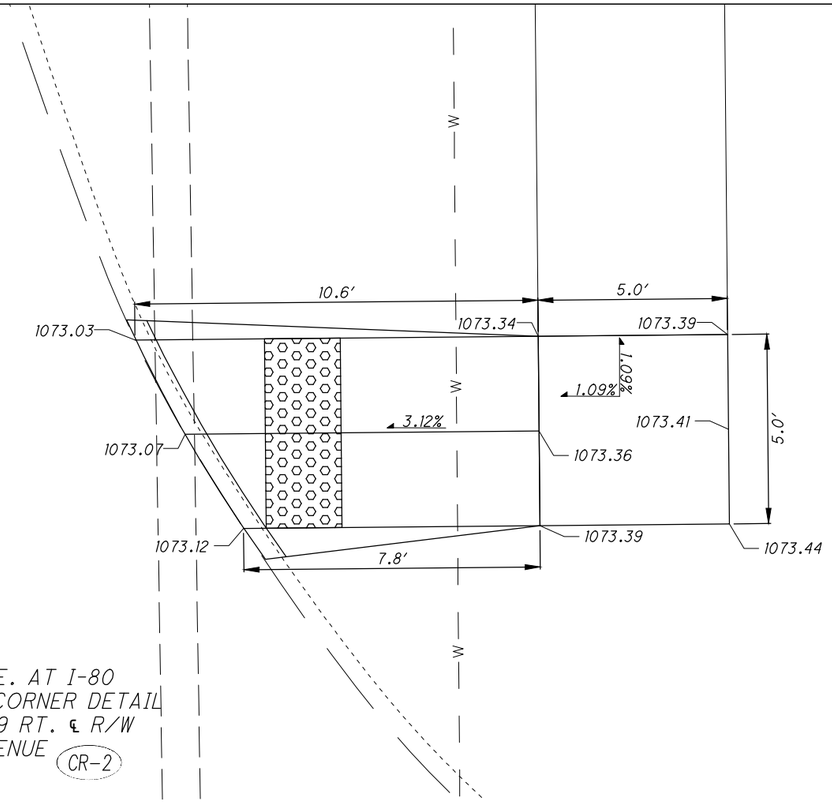
Liberty Township
Belmont Avenue Sidewalks
Phase 1

XS-5

Drawing File: O:\2022\2022287\00 - Belmont Ave Sidewalks Phase 1\WRTA\Design\Sheets\2022287\00xs-1.dwg Layout: XS-5
Date: Mar 12, 2024 Time: 10:45 am Twist: -1.5079633
Technician: nshaffer



BELMONT AVE. AT I-80
NORTHWEST CORNER DETAIL
STA. 0+10.49 LT. ℄ R/W
BELMONT AVENUE
CR-1



BELMONT AVE. AT I-80
NORTHEAST CORNER DETAIL
STA. 0+24.79 RT. ℄ R/W
BELMONT AVENUE
CR-2

FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-1.

LEGEND:

DETECTABLE WARNING STRIP

Horizontal Scale in Feet
0 1 2 4

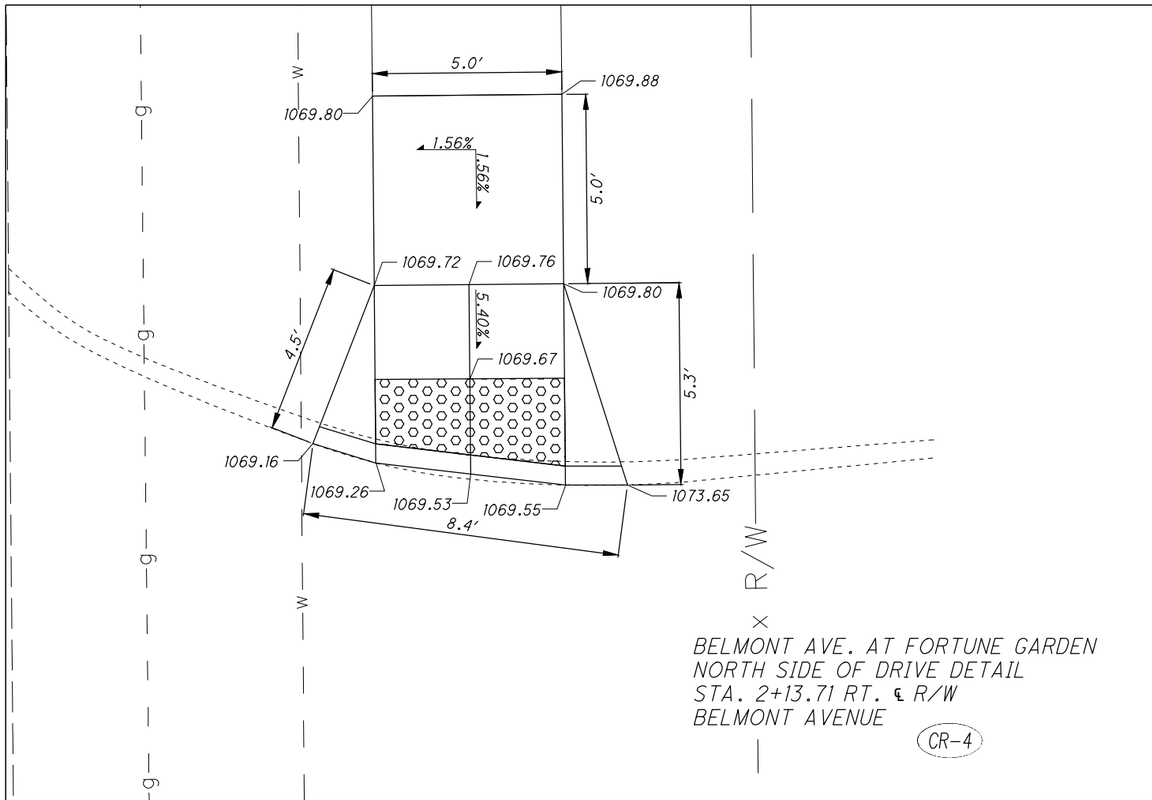
Calculated NDS
Checked CJT

CURB RAMP DETAILS
CR-1 TO CR-2

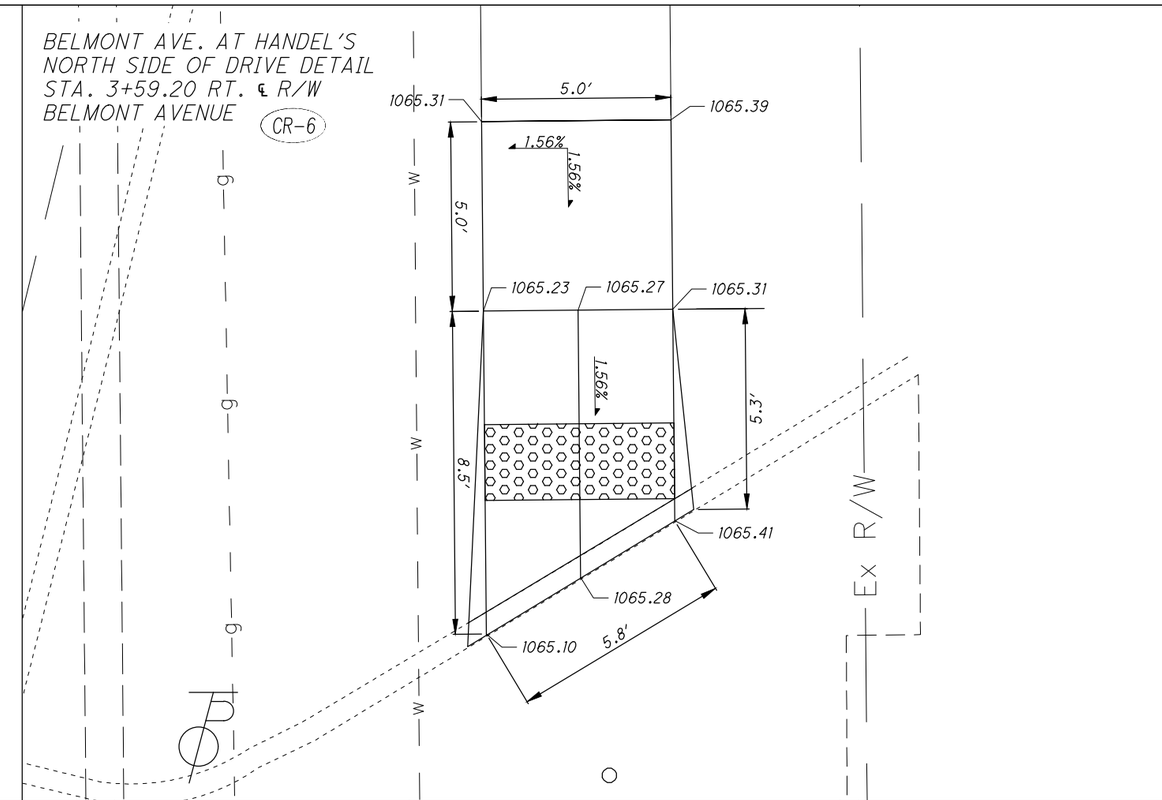
Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-1

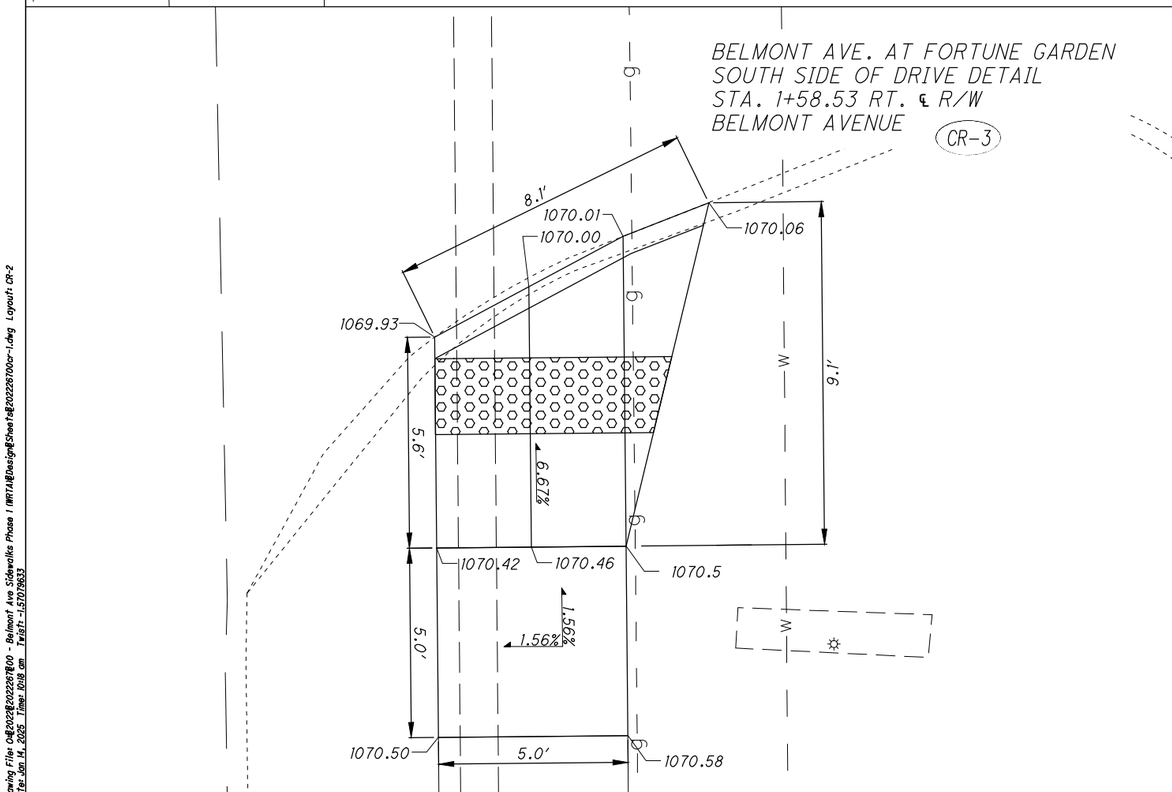
Drawing File: O:\2022\2022670\00 - Belmont Ave Sidewalks Phase 1\INITIAL\Design\Sheets\2022670\0cr-1.dwg Layout: CR-1
Date: Jan 14, 2025 Time: 9:18 am Twist: -1.57179633
Technician: nshaffer



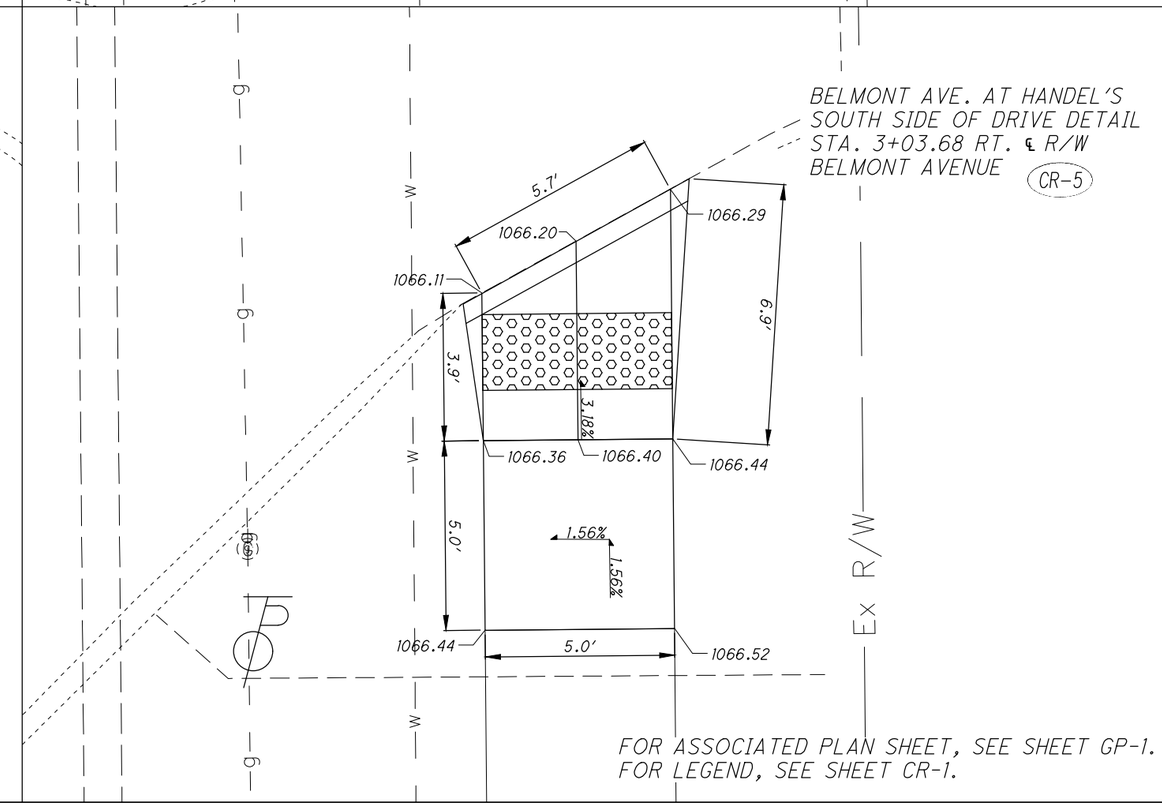
BELMONT AVE. AT FORTUNE GARDEN
NORTH SIDE OF DRIVE DETAIL
STA. 2+13.71 RT. ℄ R/W
BELMONT AVENUE
CR-4



BELMONT AVE. AT HANDEL'S
NORTH SIDE OF DRIVE DETAIL
STA. 3+59.20 RT. ℄ R/W
BELMONT AVENUE
CR-6



BELMONT AVE. AT FORTUNE GARDEN
SOUTH SIDE OF DRIVE DETAIL
STA. 1+58.53 RT. ℄ R/W
BELMONT AVENUE
CR-3



BELMONT AVE. AT HANDEL'S
SOUTH SIDE OF DRIVE DETAIL
STA. 3+03.68 RT. ℄ R/W
BELMONT AVENUE
CR-5

FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-1.
FOR LEGEND, SEE SHEET CR-1.

N

Horizontal Scale in Feet
0 1 2 4

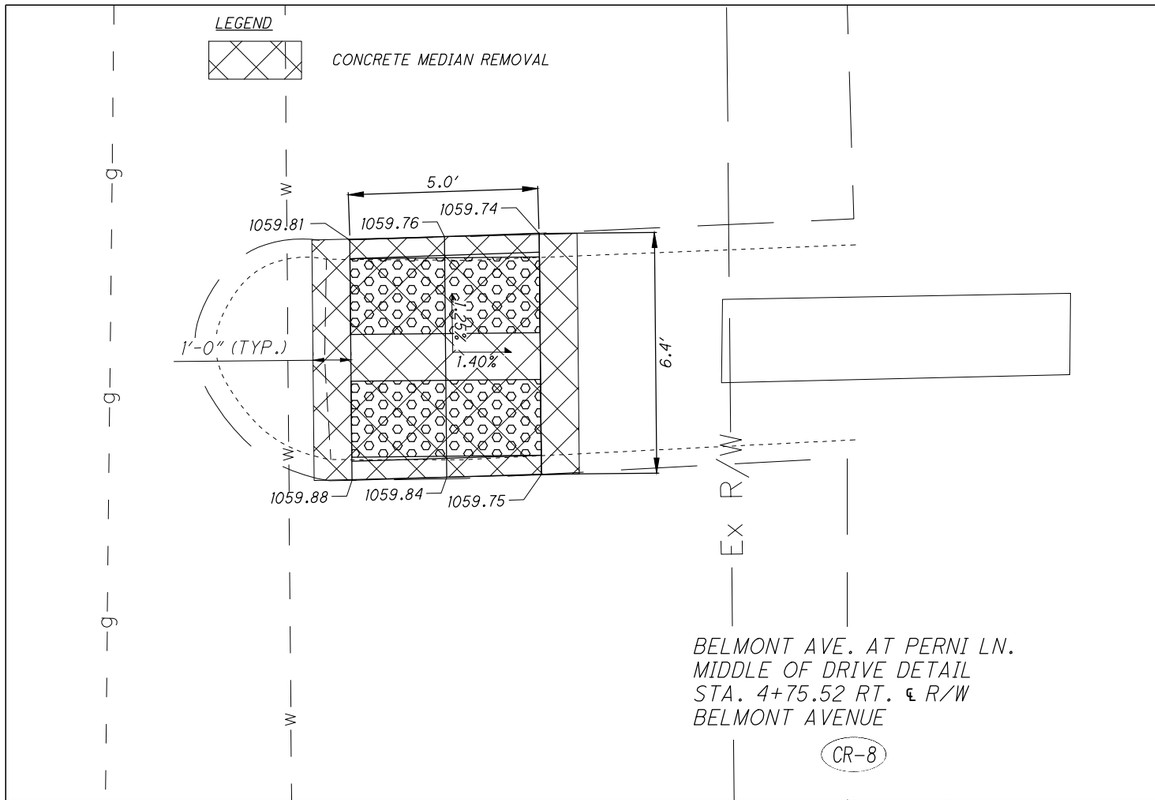
Calculated NDS
Checked CJT

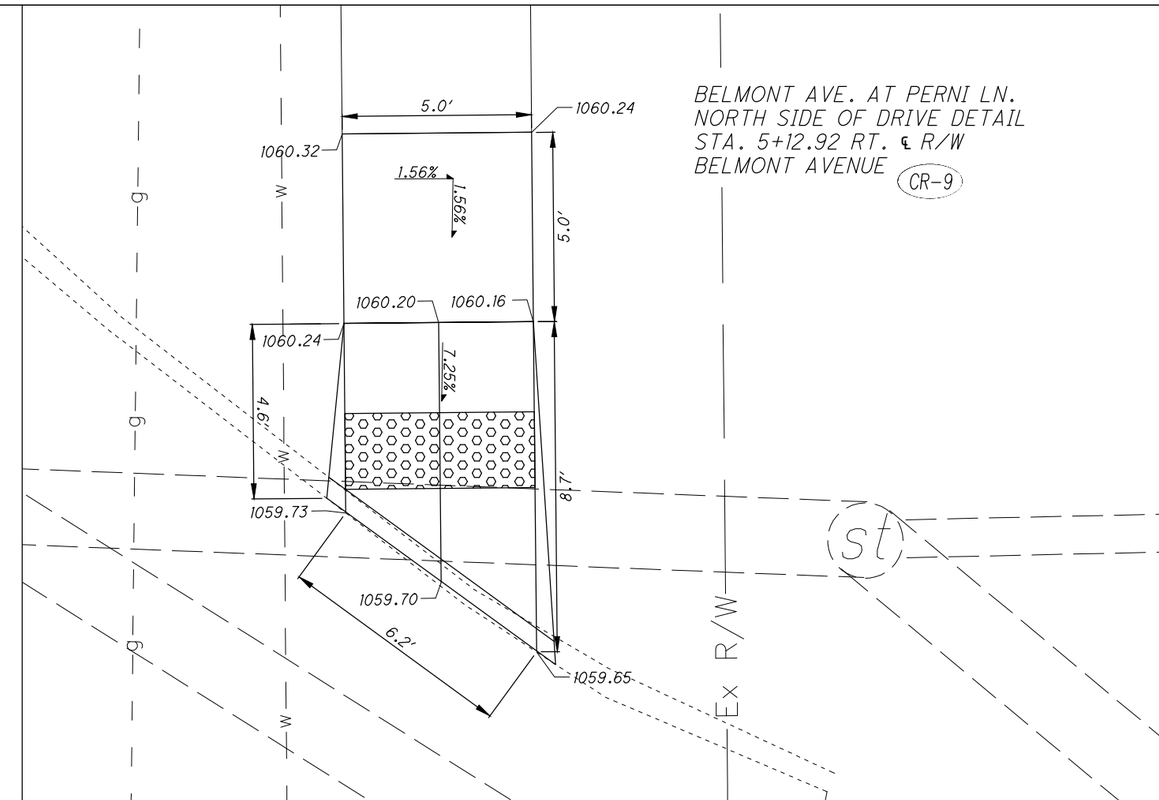
CURB RAMP DETAILS
CR-3 TO CR-6

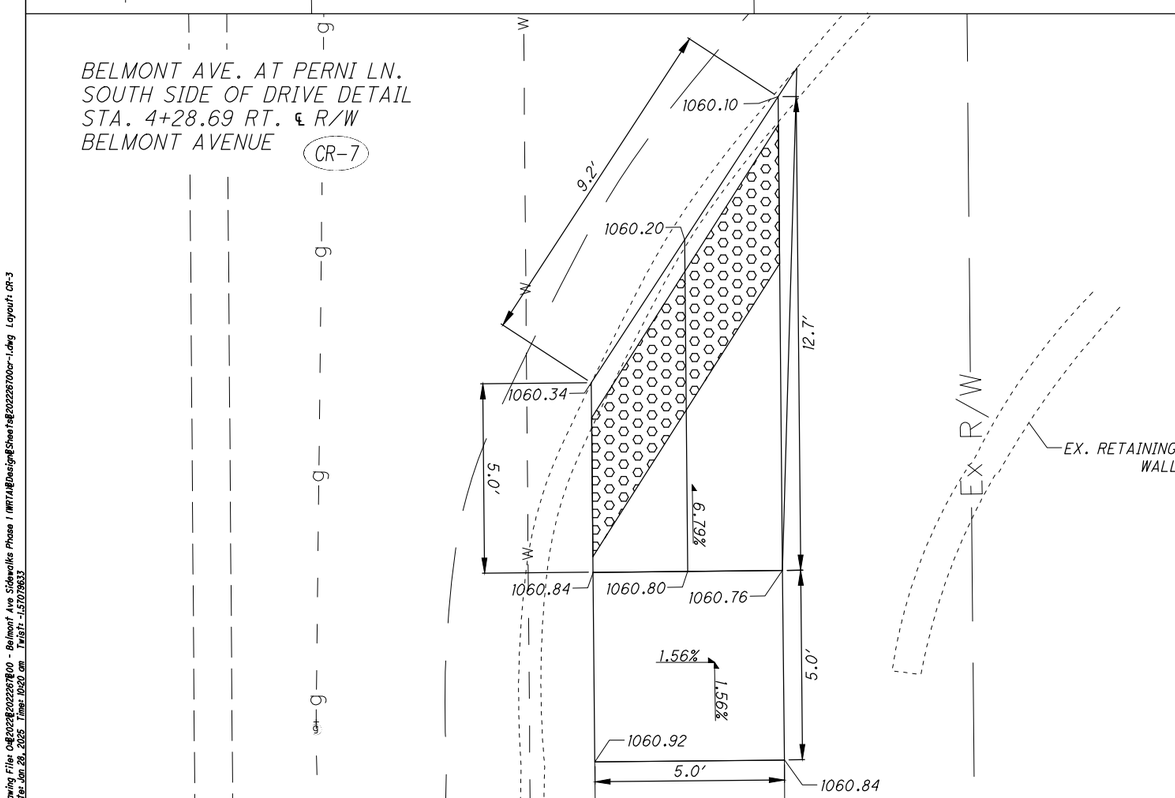
Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-2

Drawing File: O:\2022\2022287100 - Belmont Ave Sidewalks Phase I (MRTA)\Design\Sheets\2022287100cr-1.dwg Layout: CR-2
Date: Jan 14, 2025 Time: 10:18 am Twisft - 5707589633
Technician: nshaffer







FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-1.
FOR LEGEND, SEE SHEET CR-1.

N

Horizontal Scale in Feet
0 1 2 4

Calculated NDS
Checked CJT

CURB RAMP DETAILS
CR-7 TO CR-9

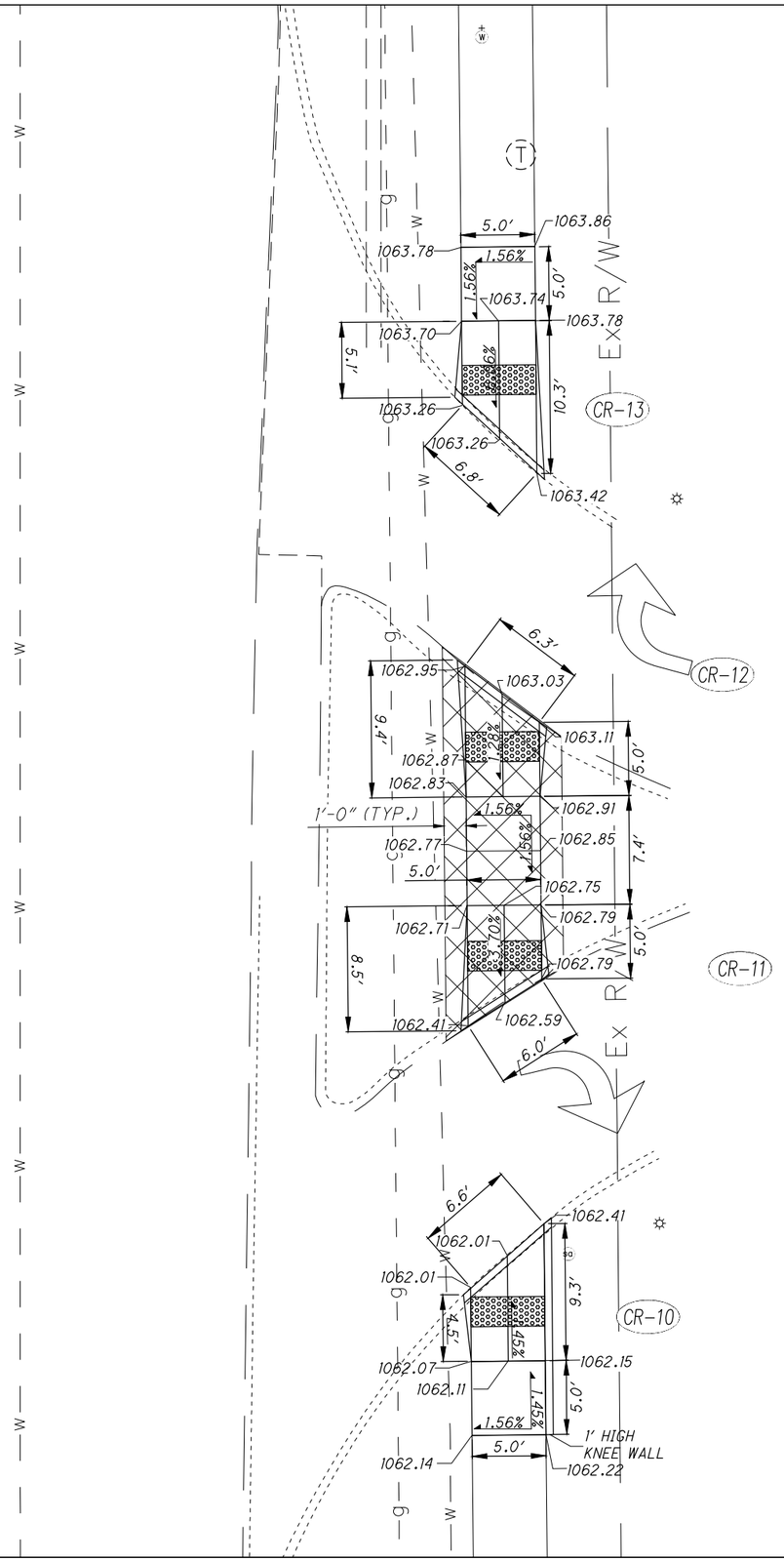
Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-3

Drawing File: O:\2022\2022287100 - Belmont Ave Sidewalks Phase I (MRTA)\Design\Sheets\2022287100cr-1.dwg Layout: CR-3
Date: Jan 28, 2025 Time: 10:20 am Twist: -1.57079633
Technician: nshaffer

LEGEND

CONCRETE MEDIAN REMOVAL



BELMONT AVE. AT DUNKIN'
NORTH SIDE OF DRIVE DETAILS

CR-12

STA. 6+76.75 RT. ℄ R/W
BELMONT AVENUE

CR-13

STA. 6+98.58 RT. ℄ R/W
BELMONT AVENUE

BELMONT AVE. AT DUNKIN'
SOUTH SIDE OF DRIVE DETAILS

CR-11

STA. 6+61.27 RT. ℄ R/W
BELMONT AVENUE

CR-10

STA. 6+33.58 RT. ℄ R/W
BELMONT AVENUE

FOR ASSOCIATED PLAN SHEET, SEE SHEETS GP-2
FOR LEGEND, SEE SHEET CR-1.

N

0 2.5 5 10
Horizontal Scale in Feet

Calculated NDS
Checked CJT

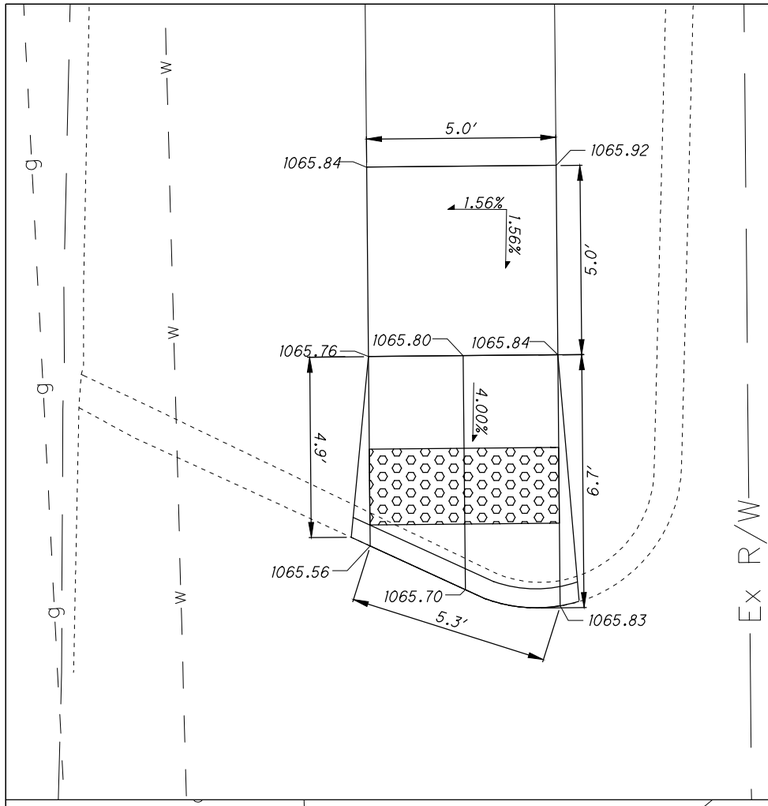
CURB RAMP DETAILS
CR-10 TO CR-13

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-4

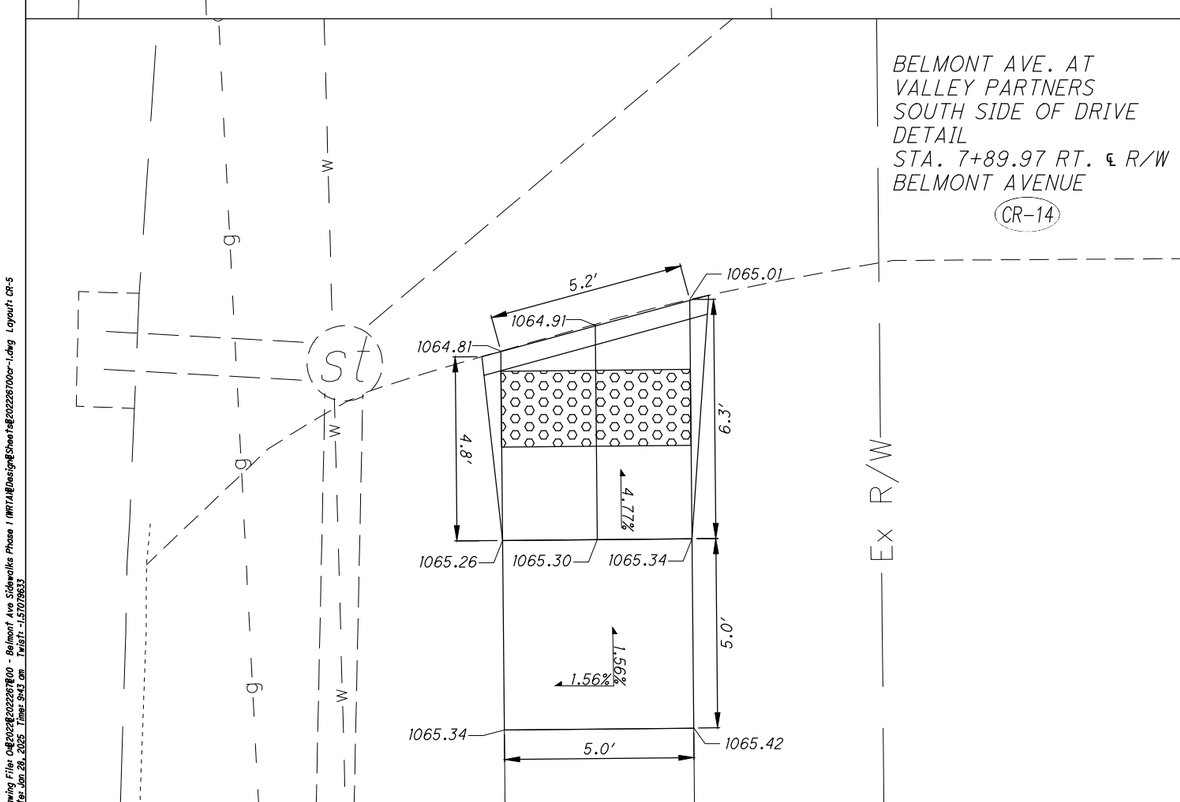
Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase I (MVTA)\Design\Sheets\2022267100cr-1.dwg Layout: CR-4
Date: May 09, 2025 Time: 14:7 pm Twist: -1.57079633

Technician: nshaffer



BELMONT AVE. AT
VALLEY PARTNERS
NORTH SIDE OF DRIVE
DETAIL
STA. 8+32.52 RT. ℄ R/W
BELMONT AVENUE

CR-15



BELMONT AVE. AT
VALLEY PARTNERS
SOUTH SIDE OF DRIVE
DETAIL
STA. 7+89.97 RT. ℄ R/W
BELMONT AVENUE

CR-14

FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-2.
FOR LEGEND, SEE SHEET CR-1.

N

0 1 2 4
Horizontal Scale in Feet

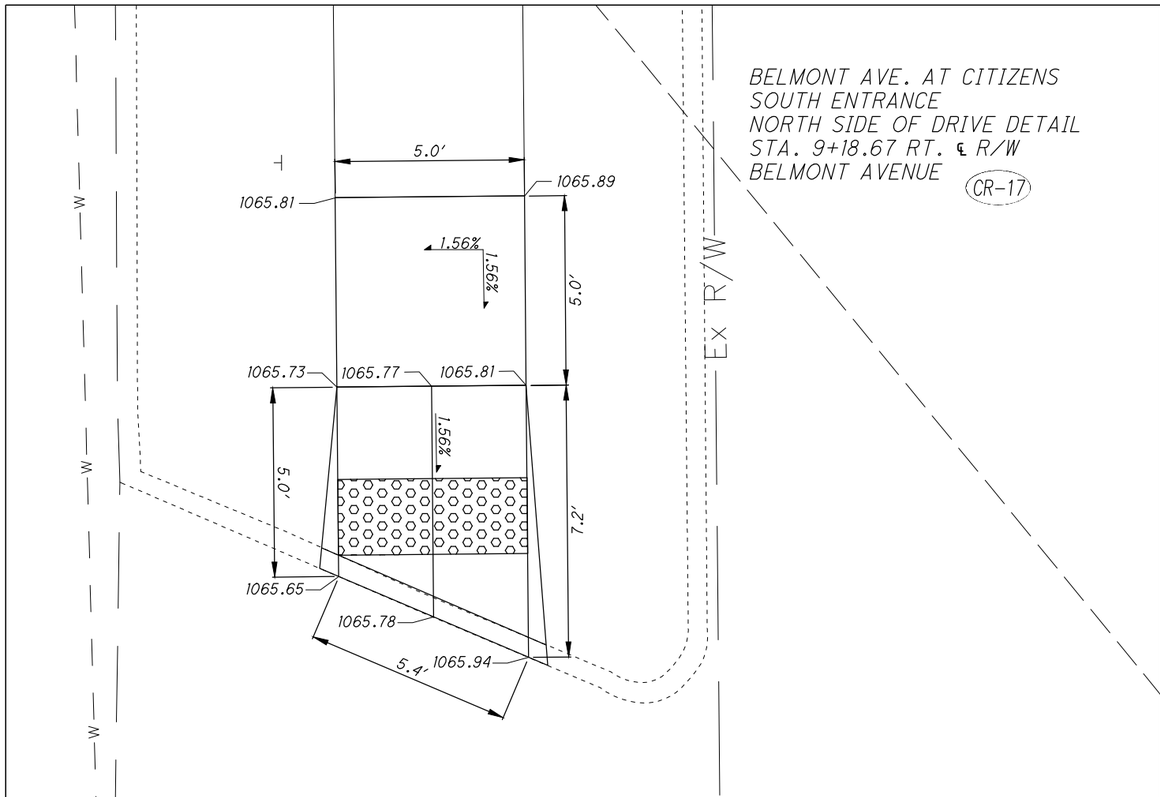
Calculated NDS
Checked CJT

CURB RAMP DETAILS
CR-14 TO CR-15

Liberty Township
Belmont Avenue Sidewalks
Phase 1

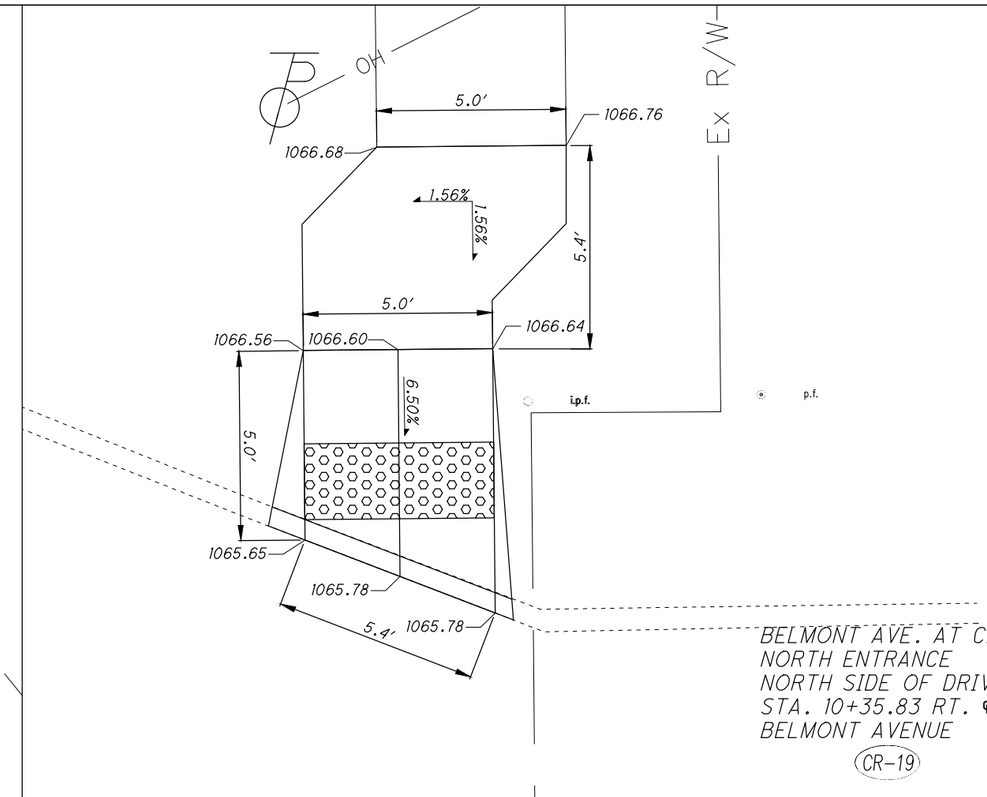
CR-5

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase I (MVTA)\Design\Sheets\2022267100cr-1.dwg Layout: CR-5
Date: Jan 28, 2025 Time: 9:43 am Twist: -1.57079633
Technician: nshaffer



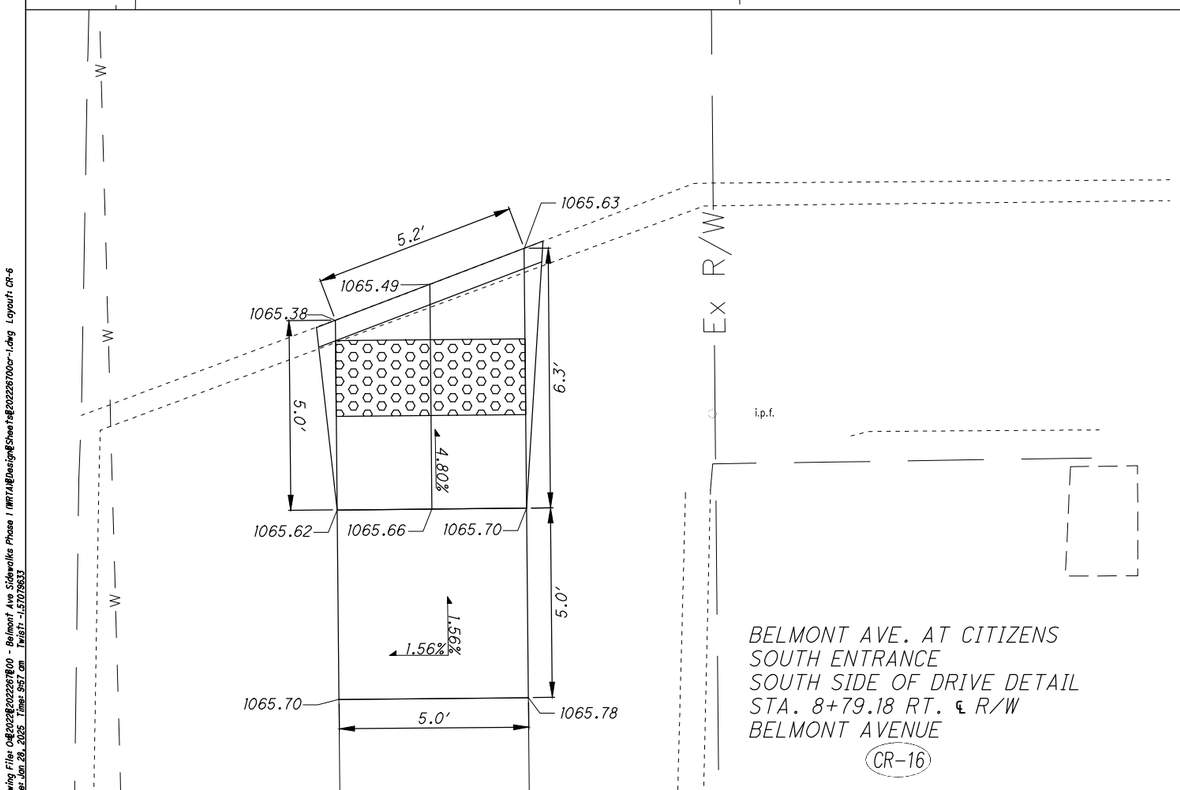
BELMONT AVE. AT CITIZENS
SOUTH ENTRANCE
NORTH SIDE OF DRIVE DETAIL
STA. 9+18.67 RT. ℄ R/W
BELMONT AVENUE

CR-17



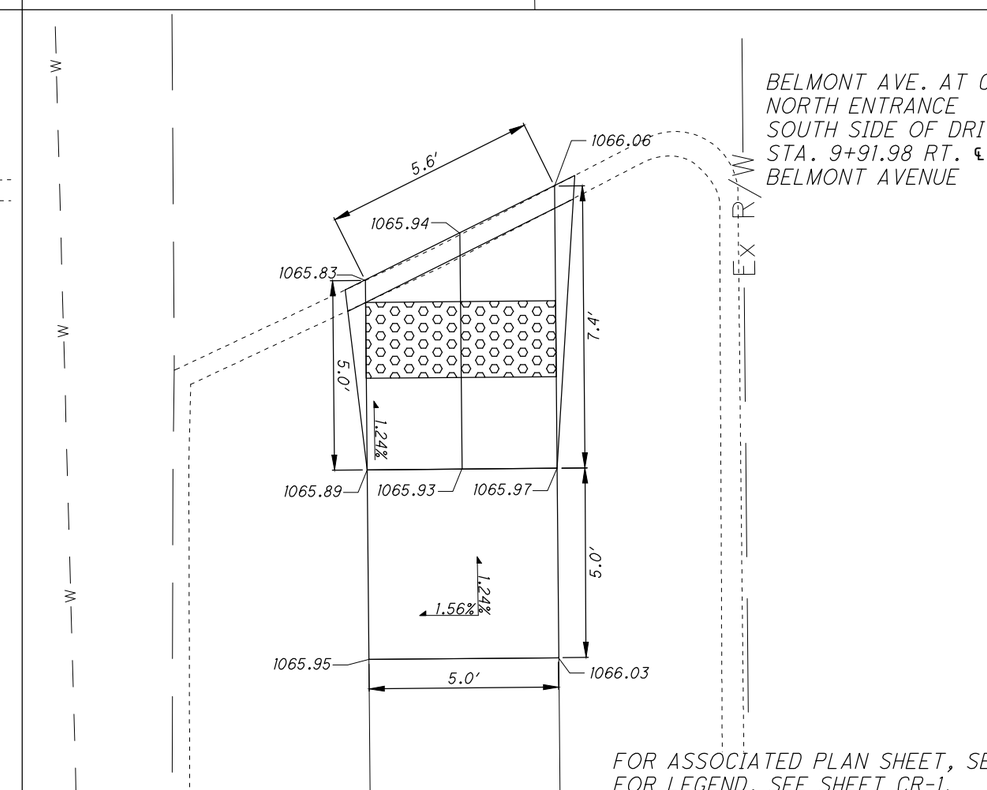
BELMONT AVE. AT CITIZENS
NORTH ENTRANCE
NORTH SIDE OF DRIVE DETAIL
STA. 10+35.83 RT. ℄ R/W
BELMONT AVENUE

CR-19



BELMONT AVE. AT CITIZENS
SOUTH ENTRANCE
SOUTH SIDE OF DRIVE DETAIL
STA. 8+79.18 RT. ℄ R/W
BELMONT AVENUE

CR-16



BELMONT AVE. AT CITIZENS
NORTH ENTRANCE
SOUTH SIDE OF DRIVE DETAIL
STA. 9+91.98 RT. ℄ R/W
BELMONT AVENUE

CR-18

FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-2.
FOR LEGEND, SEE SHEET CR-1.

Horizontal Scale in Feet
0 1 2 4

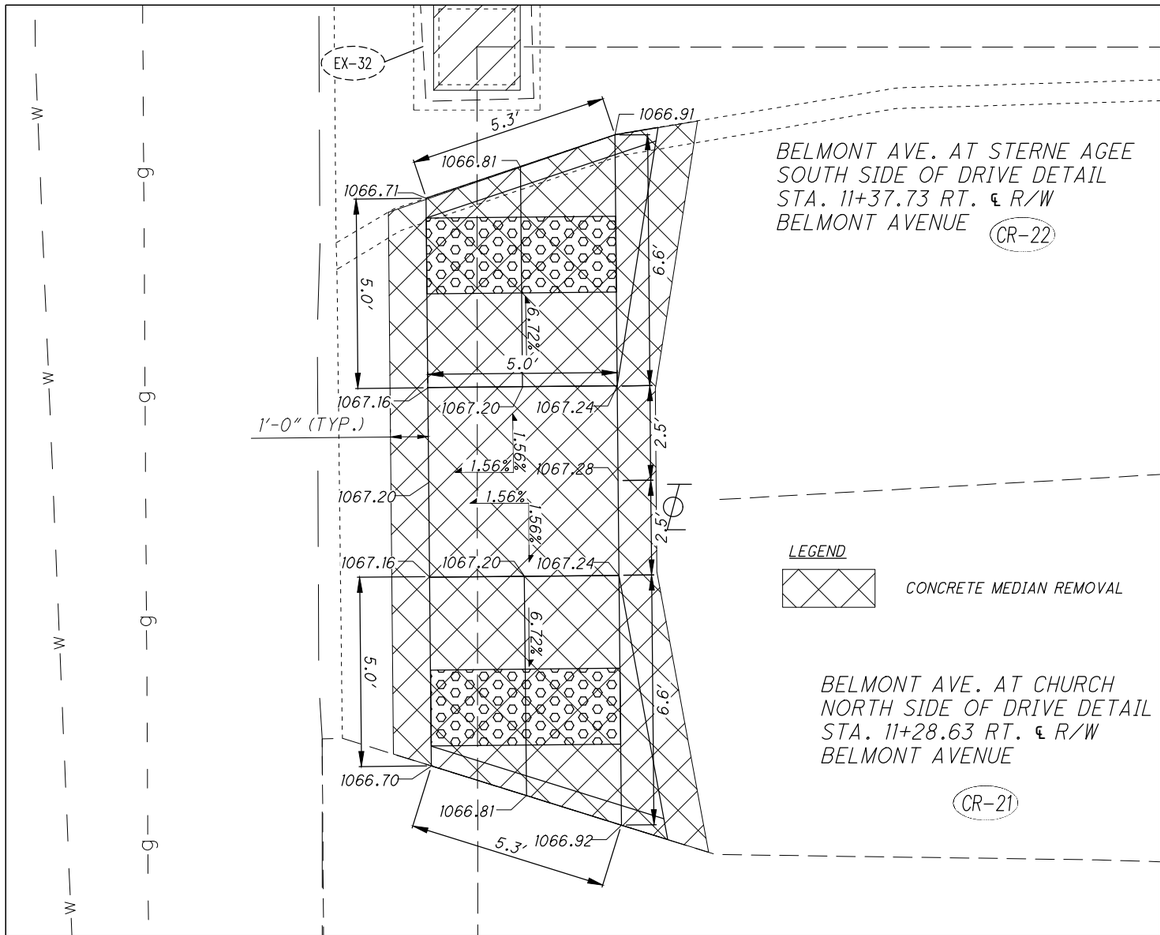
Calculated NDS
Checked CJT

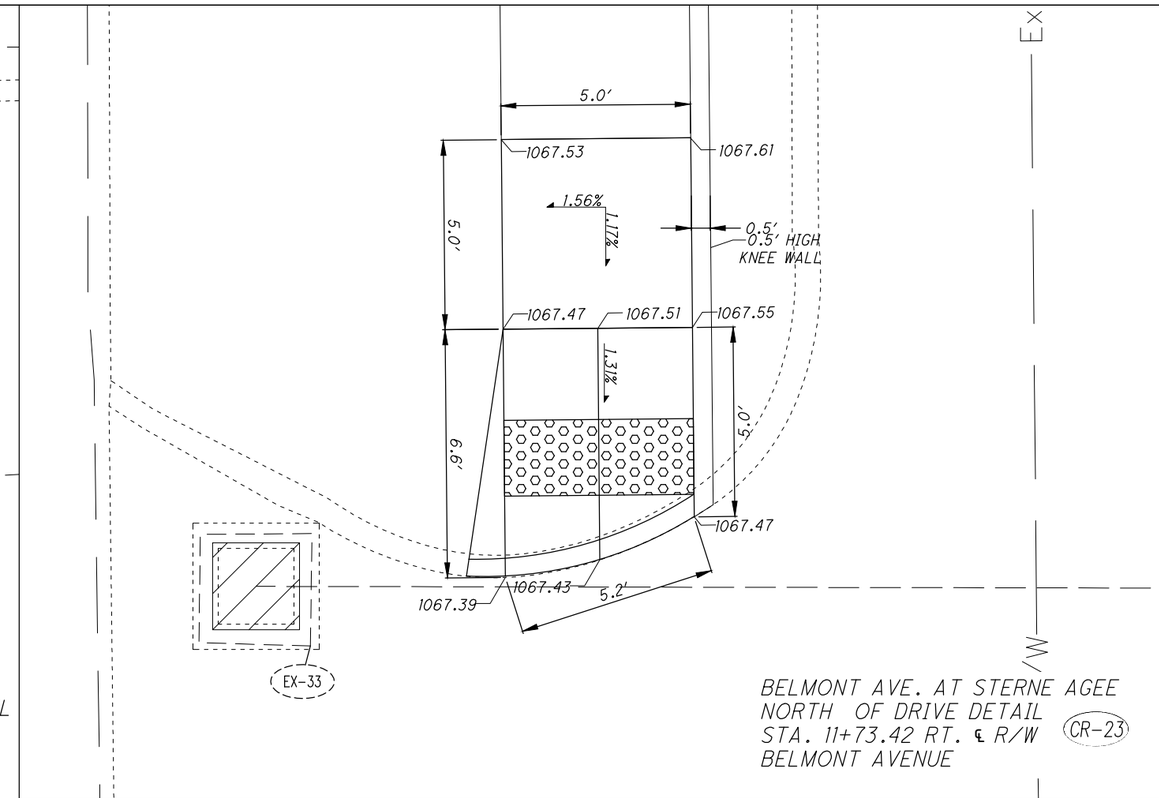
CURB RAMP DETAILS
CR-16 TO CR-19

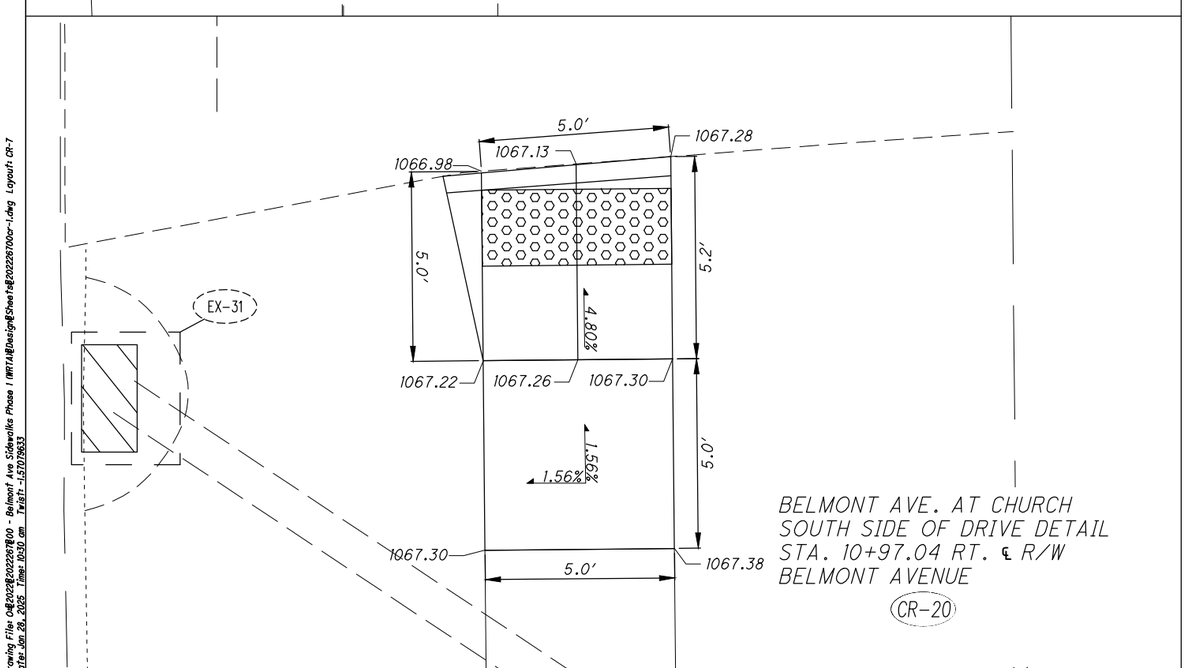
Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-6

Drawing File: O:\2022\2022287100 - Belmont Ave Sidewalks Phase I (MRTIA)\Design\Sheets\2022287100cr-1.dwg Layout: CR-6
Date: Jan 28, 2025 Time: 9:57 am Twist1-1.57079633
Technician: nshaffer







FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-3.
FOR LEGEND, SEE SHEET CR-1.

N

Horizontal Scale in Feet
0 1 2 4

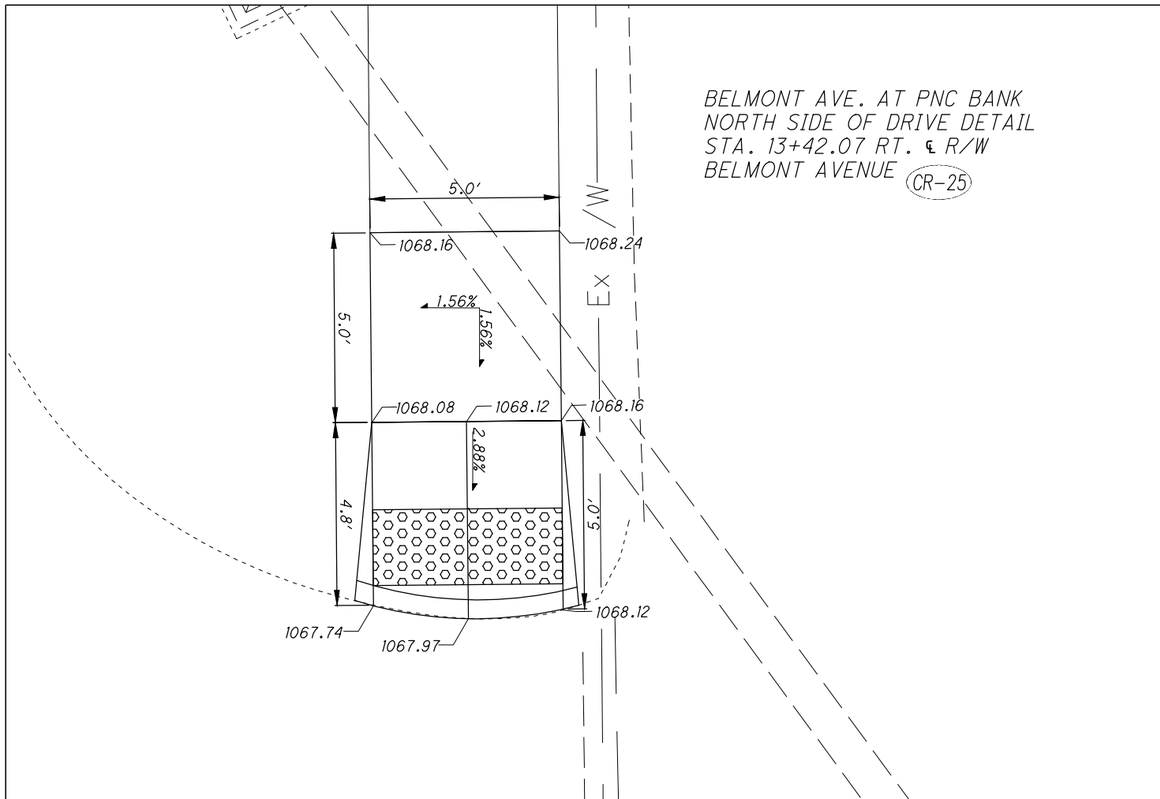
Calculated NDS
Checked CJT

CURB RAMP DETAILS
CR-20 TO CR-23

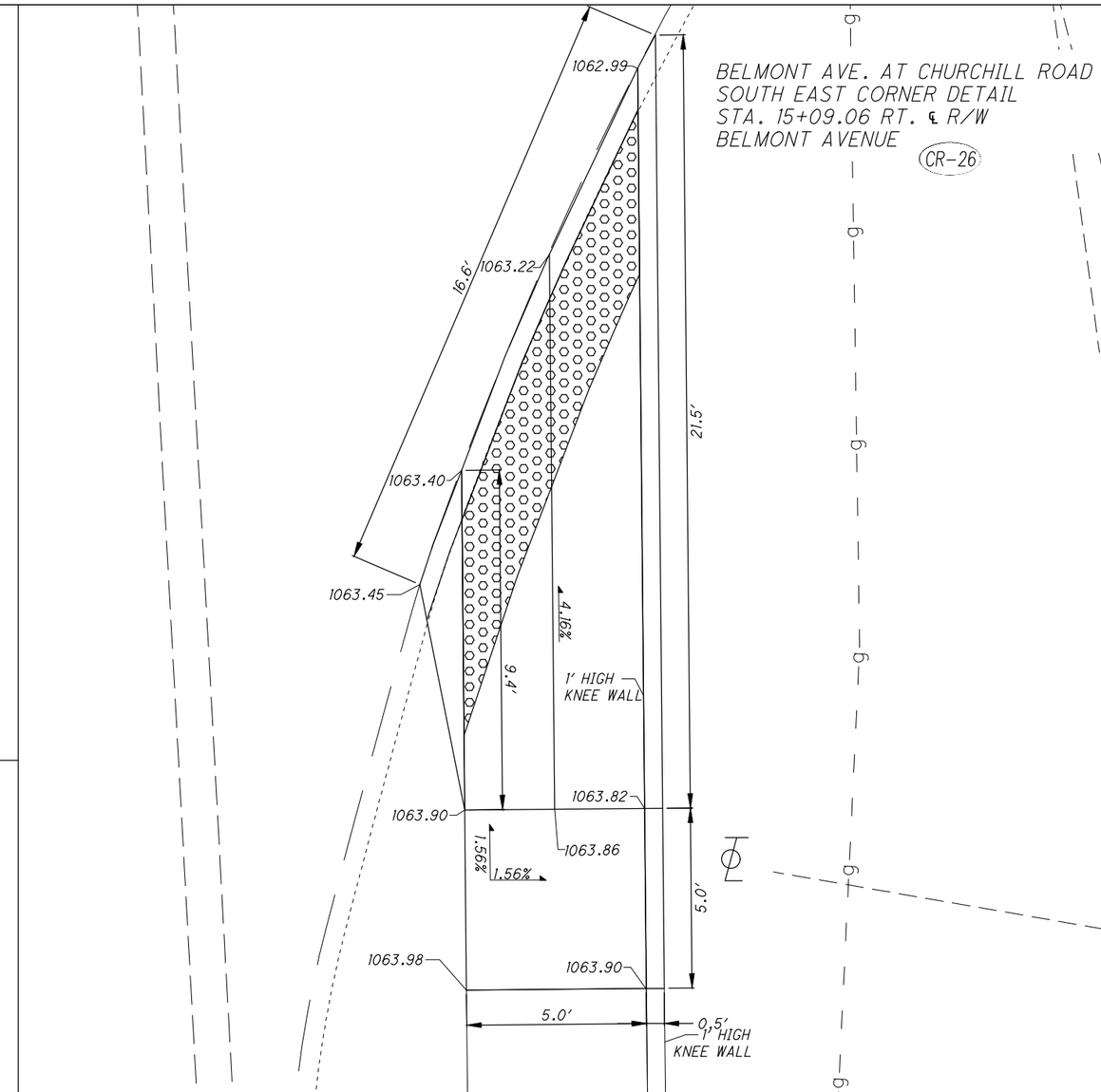
Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-7

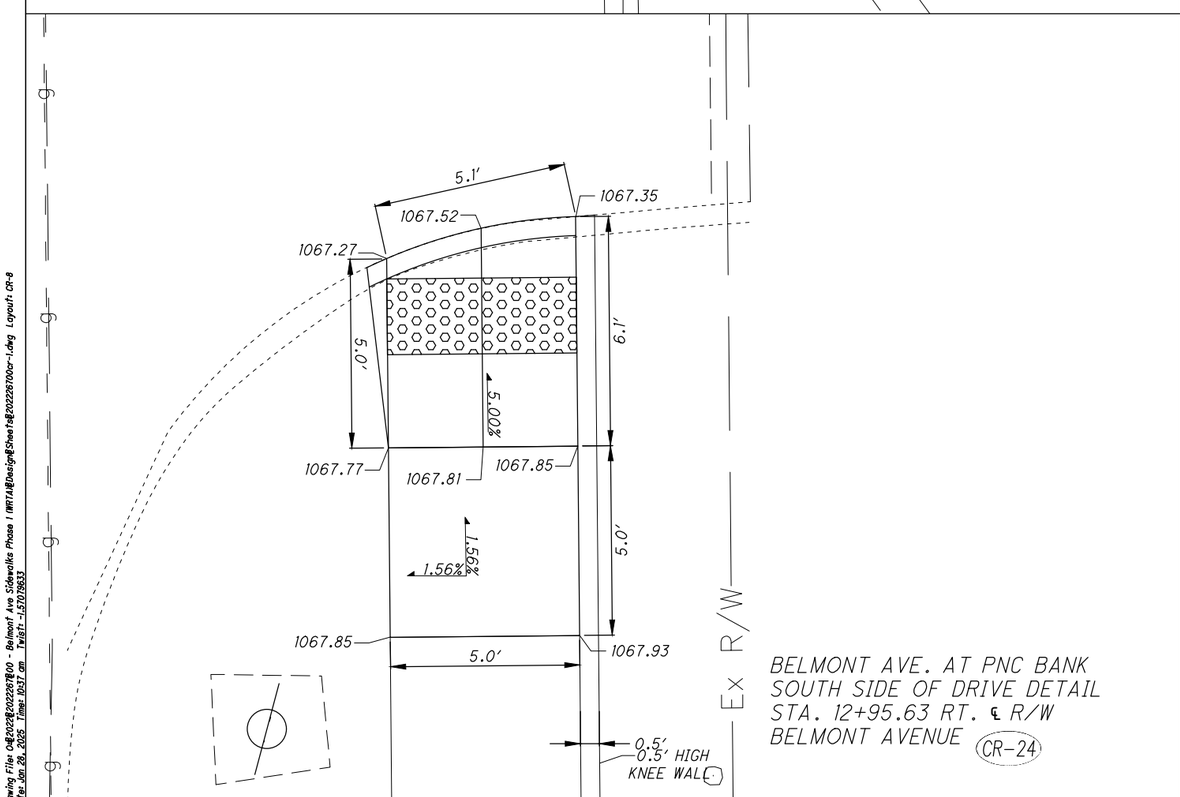
Drawing File: C:\PW2022\2022267\00 - Belmont Ave Sidewalks Phase 1 (MRTIA)\Design\Sheets\2022267100cr-1.dwg Layout: CR-7
Date: Jan 28, 2025 Time: 10:50 am Twist: -1.57079633
Technician: nshaffer



BELMONT AVE. AT PNC BANK
NORTH SIDE OF DRIVE DETAIL
STA. 13+42.07 RT. ℄ R/W
BELMONT AVENUE (CR-25)



BELMONT AVE. AT CHURCHILL ROAD
SOUTH EAST CORNER DETAIL
STA. 15+09.06 RT. ℄ R/W
BELMONT AVENUE (CR-26)



BELMONT AVE. AT PNC BANK
SOUTH SIDE OF DRIVE DETAIL
STA. 12+95.63 RT. ℄ R/W
BELMONT AVENUE (CR-24)

FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-3.
FOR LEGEND, SEE SHEET CR-1.

N

0 1 2 4
Horizontal Scale in Feet

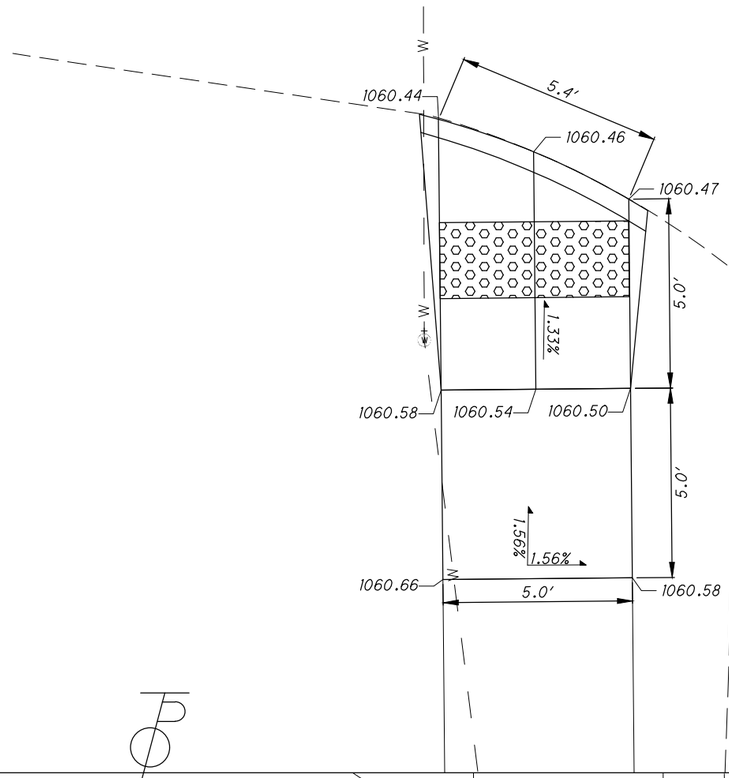
Calculated NDS
Checked CJT

CURB RAMP DETAILS
CR-24 TO CR-26

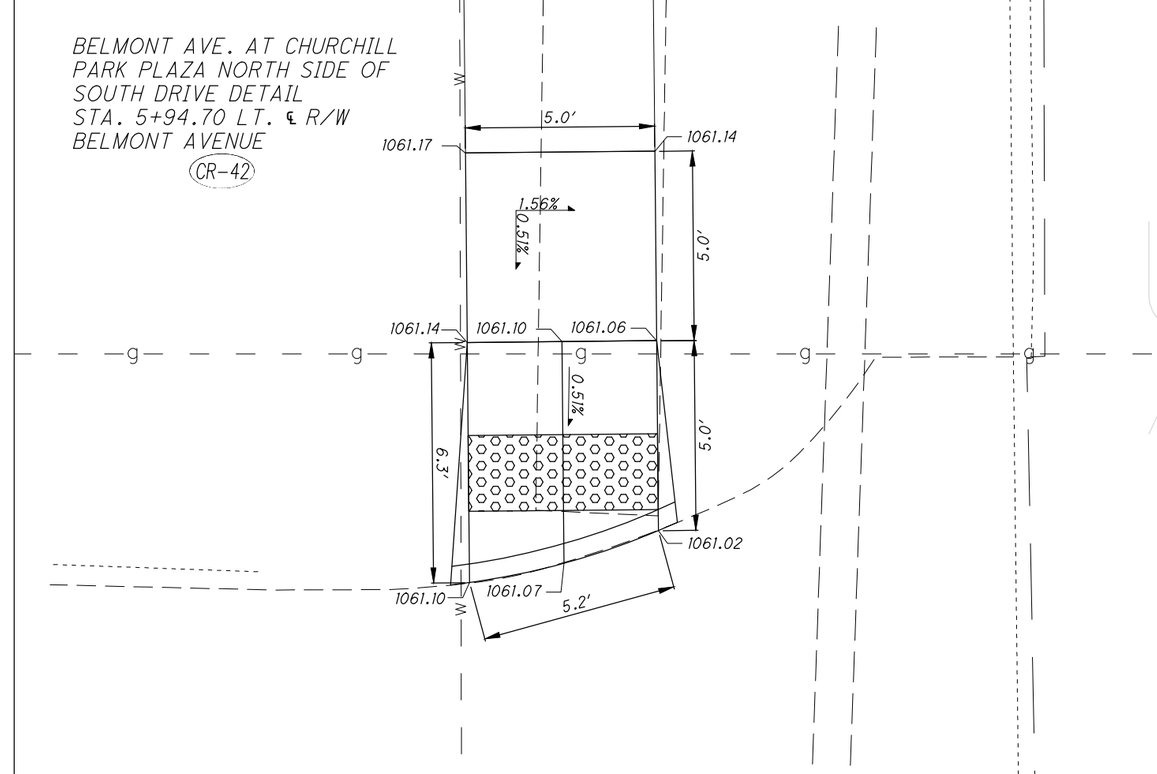
Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-8

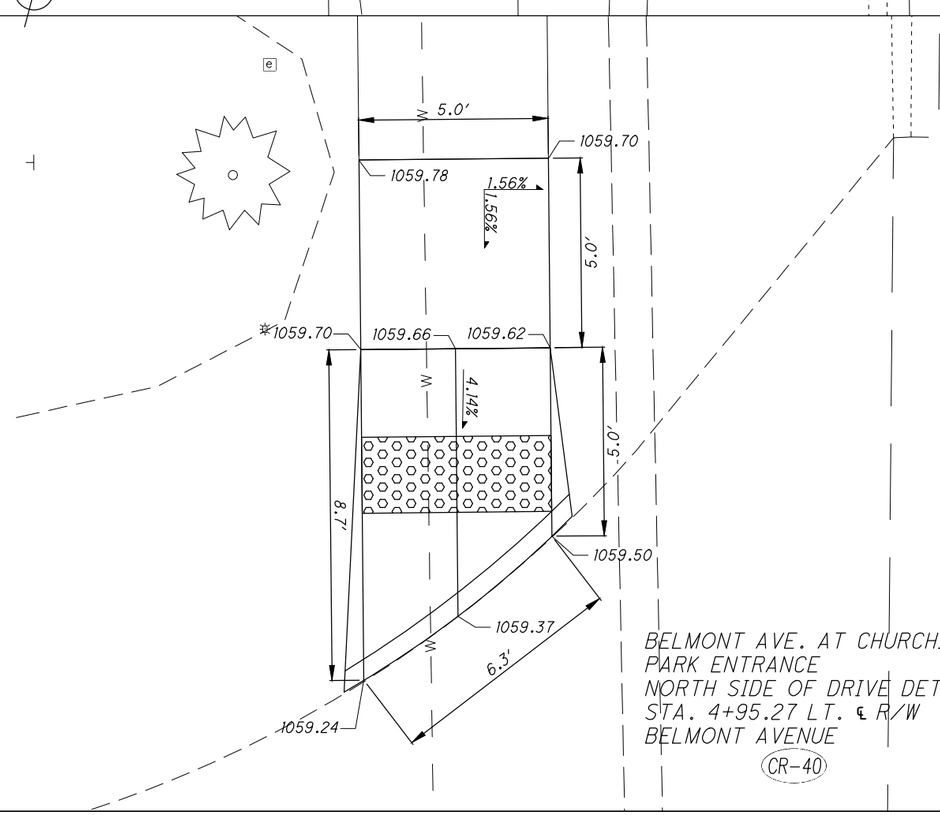
Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1\MKTA\Design\Sheets\2022267100cr-1.dwg Layout: CR-8
Date: Jan 28, 2025 Time: 10:37 am Twist: -1.57079633
Technician: nshaffer



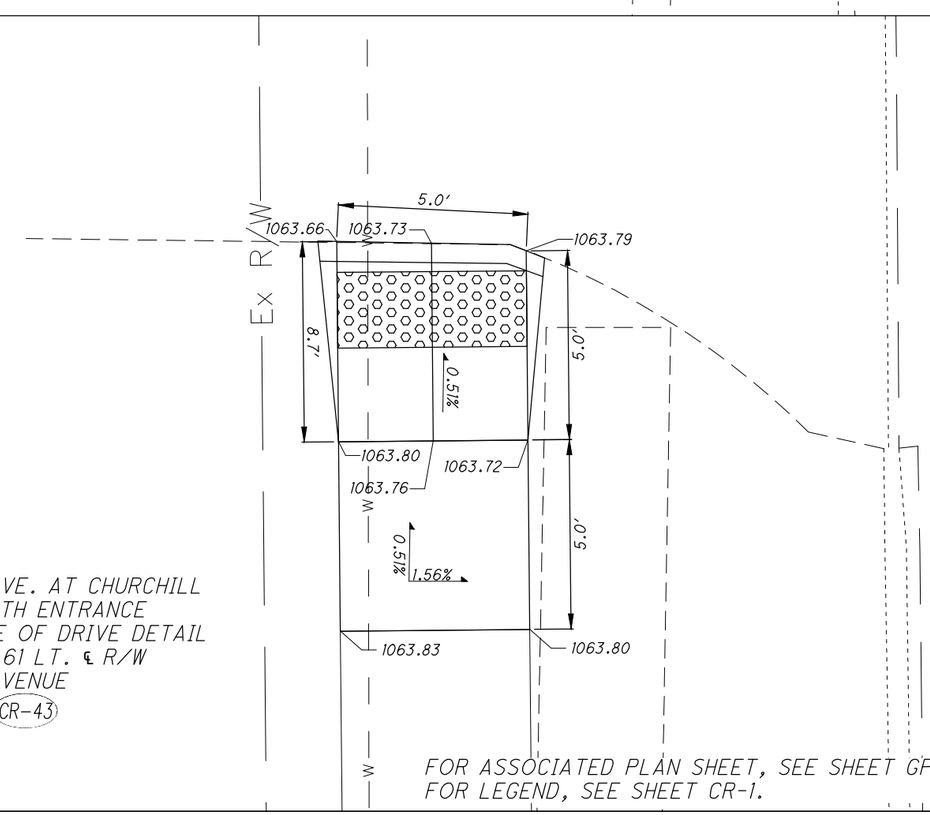
BELMONT AVE. AT CHURCHILL
PARK PLAZA SOUTH SIDE OF
SOUTH DRIVE DETAIL
STA. 5+58.95 LT. ℄ R/W
BELMONT AVENUE
CR-41



BELMONT AVE. AT CHURCHILL
PARK PLAZA NORTH SIDE OF
SOUTH DRIVE DETAIL
STA. 5+94.70 LT. ℄ R/W
BELMONT AVENUE
CR-42



BELMONT AVE. AT CHURCHILL
PARK ENTRANCE
NORTH SIDE OF DRIVE DETAIL
STA. 4+95.27 LT. ℄ R/W
BELMONT AVENUE
CR-40



BELMONT AVE. AT CHURCHILL
PLAZA NORTH ENTRANCE
SOUTH SIDE OF DRIVE DETAIL
STA. 7+30.61 LT. ℄ R/W
BELMONT AVENUE
CR-43

FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-4.
FOR LEGEND, SEE SHEET CR-1.

Horizontal Scale in Feet
0 1 2 4

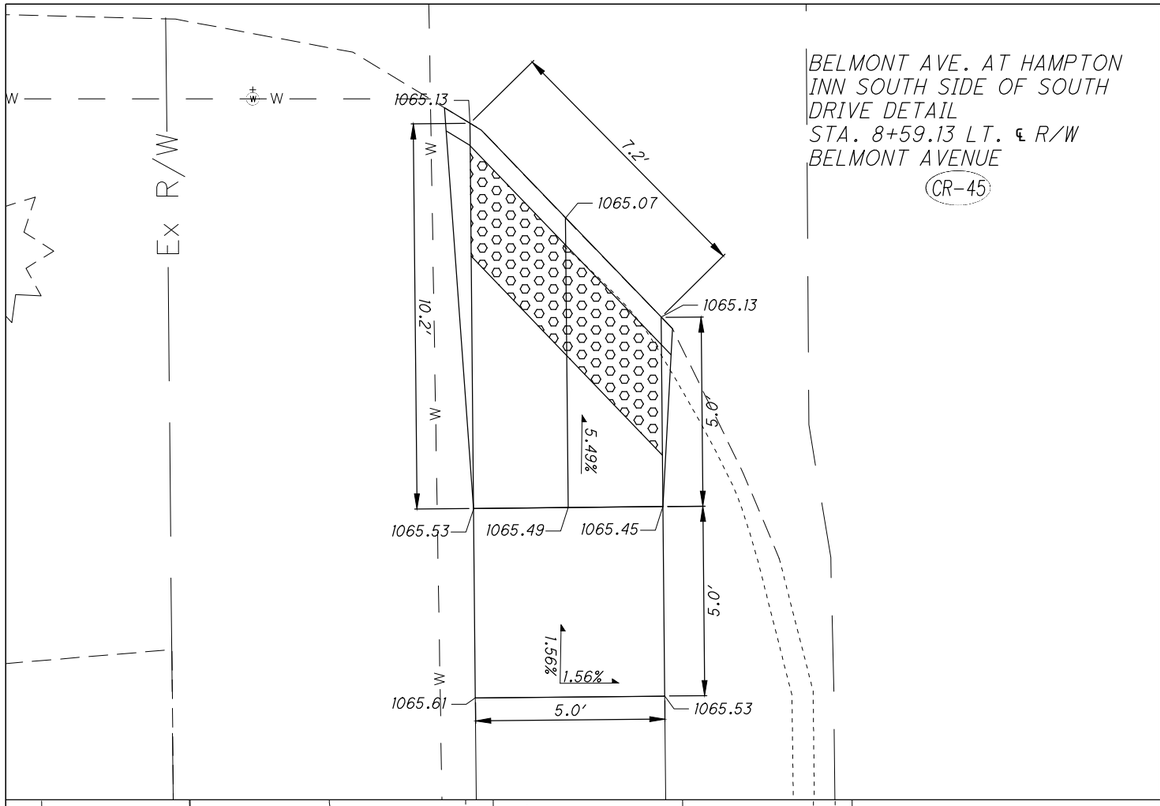
Calculated NDS
Checked CJT

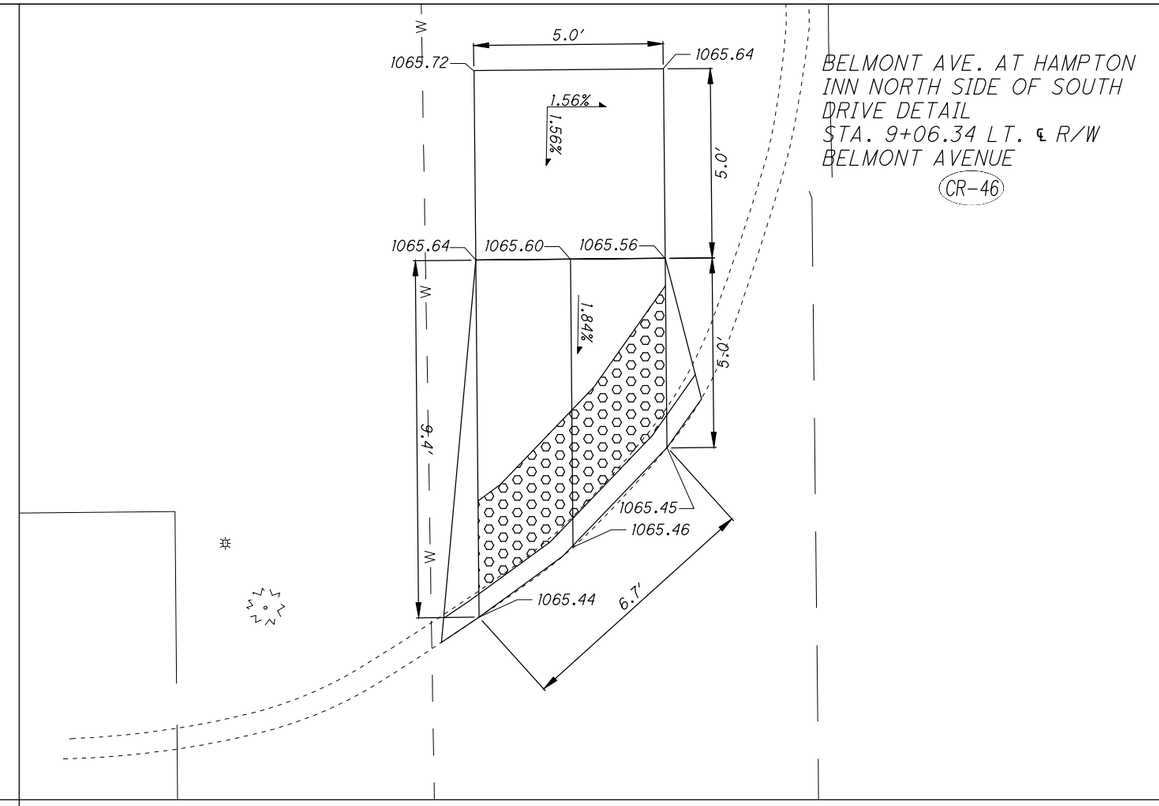
CURB RAMP DETAILS
CR-40 TO CR-43

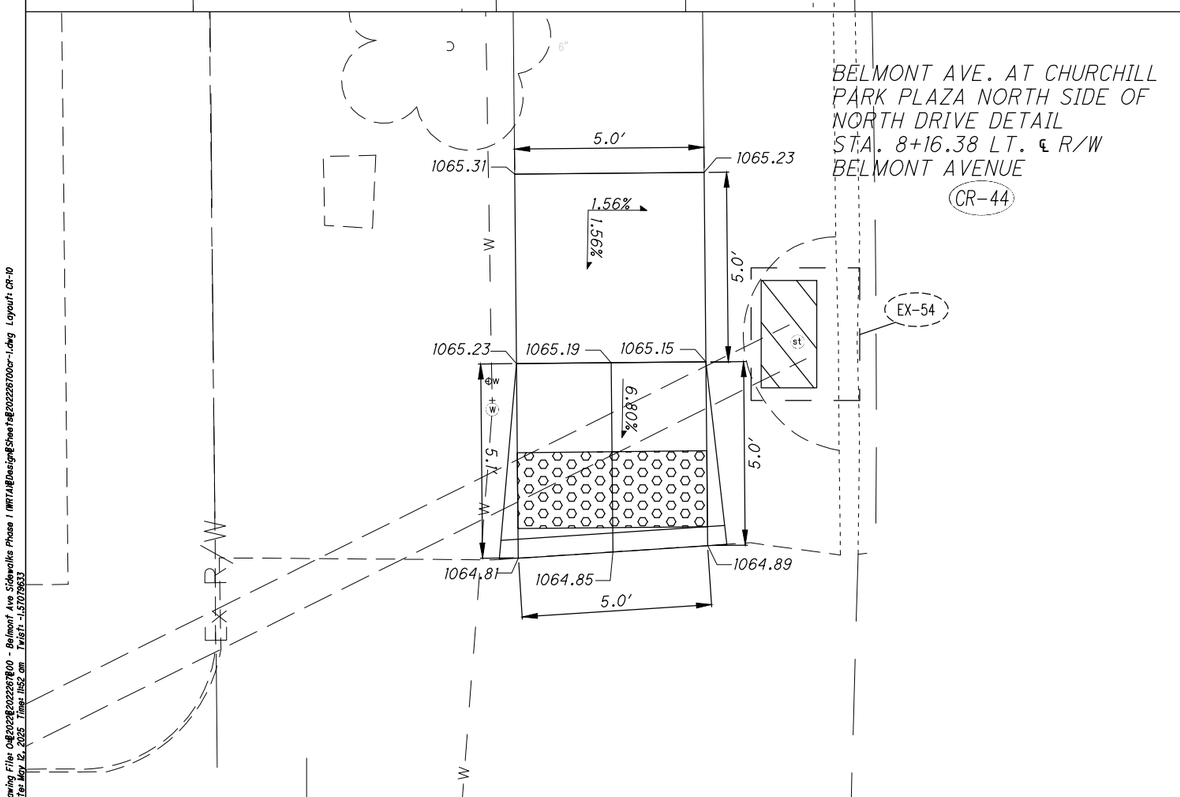
Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-9

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1 (MVTA)\Design\Sheets\2022267000r-1.dwg Layout: CR-9
Date: Jan 28, 2025 Time: 10:40 am Twist: -1.57079633
Technician: nshaffer







FOR ASSOCIATED PLAN SHEET, SEE SHEET GP-4.
FOR LEGEND, SEE SHEET CR-1.

Horizontal Scale in Feet

Calculated NDS
Checked CJT

CURB RAMP DETAILS
CR-44 TO CR-46

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-10

Drawing File: O:\2022\2022267100 - Belmont Ave Sidewalks Phase 1\MITAS\Design\Sheets\2022267100cr-1.dwg Layout: CR-10
Date: May 12, 2025 Time: 11:52 am Twist: -1.57079633
Technician: nshaffer

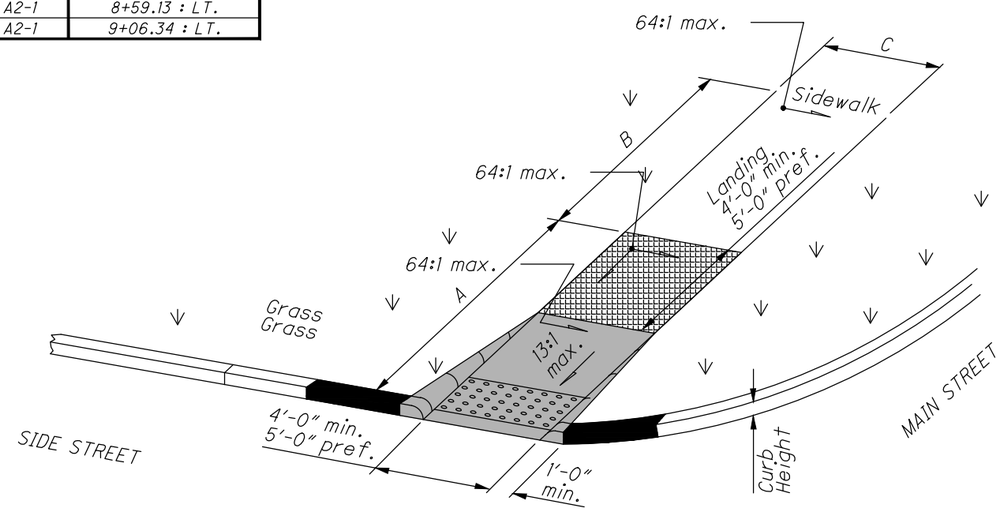
REF. NO.	MAIN ROUTE	INTERSECTION ROUTE	DESIGN SHEET	CURB RAMP TYPE	STATION/SIDE
CR-1	BELMONT AVENUE	SPEEDWAY DRIVE / I-80	CR-1	A2-4	0+10.49 : LT.
CR-2	BELMONT AVENUE	SPEEDWAY DRIVE / I-80	CR-1	A2/C2	0+24.79 : RT.
CR-3	BELMONT AVENUE	FORTUNE GARDEN DRIVE	CR-2	A2-1	1+58.53 : RT.
CR-4	BELMONT AVENUE	FORTUNE GARDEN DRIVE	CR-2	A2-1	2+13.71 : RT.
CR-5	BELMONT AVENUE	HANDEL'S DRIVE	CR-2	A2-1	3+03.68 : RT.
CR-6	BELMONT AVENUE	HANDEL'S DRIVE	CR-2	A2-1	3+59.20 : RT.
CR-7	BELMONT AVENUE	PERNI LANE	CR-3	A2-1	4+28.69 : RT.
CR-8	BELMONT AVENUE	PERNI LANE	CR-3	A2-1	4+75.52 : RT.
CR-9	BELMONT AVENUE	PERNI LANE	CR-3	A2-1	5+12.92 : RT.
CR-10	BELMONT AVENUE	DUNKIN' DRIVE	CR-4	A2-1	6+33.58 : RT.
CR-11	BELMONT AVENUE	DUNKIN' DRIVE	CR-4	A2-1	6+61.27 : RT.
CR-12	BELMONT AVENUE	DUNKIN' DRIVE	CR-4	A2-1	6+76.75 : RT.
CR-13	BELMONT AVENUE	DUNKIN' DRIVE	CR-4	A2-1	6+98.58 : RT.
CR-14	BELMONT AVENUE	VALLEY PARTNERS DRIVE	CR-5	A2-1	7+89.97 : RT.
CR-15	BELMONT AVENUE	VALLEY PARTNERS DRIVE	CR-5	A2-1	8+32.52 : RT.
CR-16	BELMONT AVENUE	CITIZENS DRIVE	CR-6	A2-1	8+79.18 : RT.
CR-17	BELMONT AVENUE	CITIZENS DRIVE	CR-6	A2-1	9+18.67 : RT.
CR-18	BELMONT AVENUE	CITIZENS DRIVE	CR-6	A2-1	9+91.98 : RT.
CR-19	BELMONT AVENUE	CITIZENS DRIVE	CR-6	A2-1	10+35.83 : RT.
CR-20	BELMONT AVENUE	CHURCH DRIVE	CR-7	A2-1	10+97.04 : RT.
CR-21	BELMONT AVENUE	CHURCH DRIVE	CR-7	A2-1	11+28.63 : RT.
CR-22	BELMONT AVENUE	STERNE AGEE DRIVE	CR-7	A2-1	11+37.73 : RT.
CR-23	BELMONT AVENUE	STERNE AGEE DRIVE	CR-7	A2-1	11+73.42 : RT.
CR-24	BELMONT AVENUE	PNC BANK DRIVE	CR-8	A2-1	12+95.63 : RT.
CR-25	BELMONT AVENUE	PNC BANK DRIVE	CR-8	A2-1	13+42.07 : RT.
CR-26	BELMONT AVENUE	CHURCHILL ROAD	CR-8	A2-1	15+09.06 : RT.
CR-40	BELMONT AVENUE	CHURCHILL PARK ENTRANCE	CR-9	A2-1	4+95.27 : LT.
CR-41	BELMONT AVENUE	CHURCHILL PARK PLAZA	CR-9	A2-1	5+58.95 : LT.
CR-42	BELMONT AVENUE	CHURCHILL PARK PLAZA	CR-9	A2-1	5+94.70 : LT.
CR-43	BELMONT AVENUE	CHURCHILL PARK PLAZA	CR-9	A2-1	7+30.61 : LT.
CR-44	BELMONT AVENUE	CHURCHILL PARK PLAZA	CR-10	A2-1	8+16.38 : LT.
CR-45	BELMONT AVENUE	HAMPTON INN	CR-10	A2-1	8+59.13 : LT.
CR-46	BELMONT AVENUE	HAMPTON INN	CR-10	A2-1	9+06.34 : LT.

* ALIGN TRUNCATED DOMES WITH THE PRIMARY DIRECTION OF THE RAMP FOR SKEWED CONDITIONS

ADA WAIVERS

AN APPROVED ADA DESIGN WAIVER IS REQUIRED ON THIS PROJECT. THE FOLLOWING FEATURES CANNOT FEASIBLY BE CONSTRUCTED TO MEET ADA GUIDELINES.

ADA FEATURE	ADA DESIGN WAIVER APPROVAL DATE	SHEET NUMBERS
CR-4	05/22/2025	CR-2
CR-5	05/22/2025	CR-2
CR-6	05/22/2025	CR-2
CR-7	05/22/2025	CR-3
CR-10	05/22/2025	CR-4
CR-11	05/22/2025	CR-4
CR-12	05/22/2025	CR-4
CR-13	05/22/2025	CR-4
CR-14	05/22/2025	CR-5
CR-15	05/22/2025	CR-5
CR-16	05/22/2025	CR-6
CR-17	05/22/2025	CR-6
CR-18	05/22/2025	CR-6
CR-19	05/22/2025	CR-6
CR-20	05/22/2025	CR-7
CR-21	05/22/2025	CR-7
CR-22	05/22/2025	CR-7
CR-25	05/22/2025	CR-8



Type A2 - 1

TRUNCATED DOMES (DETECTABLE WARNING STRIP
CONCRETE WALK
LANDING PAD
CURB RAMP
CURB

* SEE SCD BP-7.1 FOR ALL OTHER DETAILS

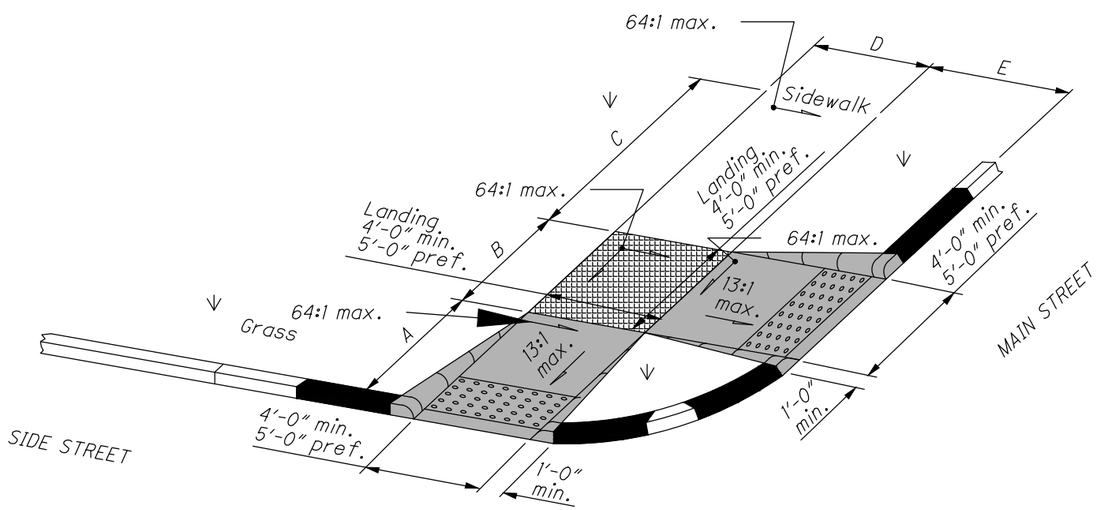
Calculated NDS
Checked CJT

CURB RAMP DETAILS

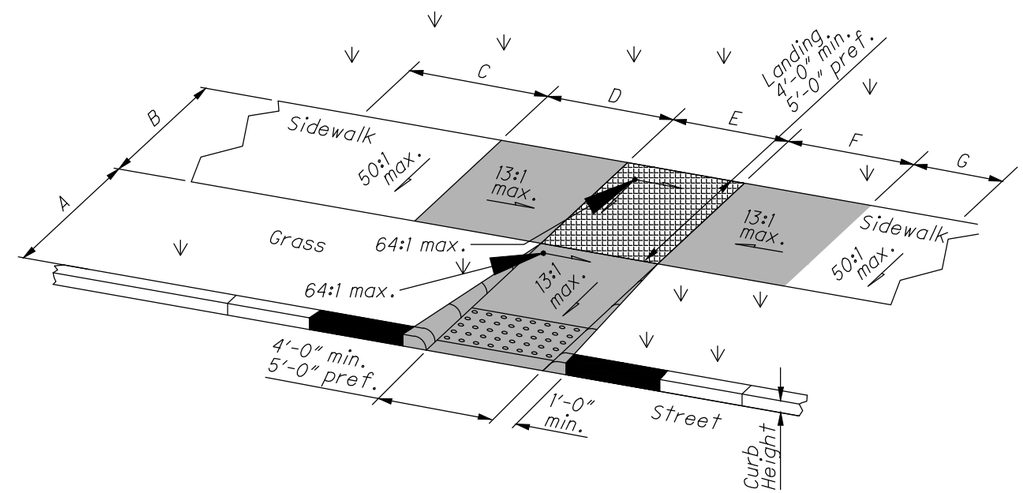
Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-11

Drawing File: O:\2022\2022267100 - Belmont Ave Sidewalks Phase 1 (MVTA)\Design\Sheets\2022267100cr-1.dwg Layout: CR-11
Date: May 21, 2025 Time: 8:51 am Twist: -1.57079633
Technician: nshaffer



Type A2 - 4



Type A2/C2

TRUNCATED DOMES (DETECTABLE WARNING STRIP
CONCRETE WALK
LANDING PAD
CURB RAMP
CURB

* SEE SCD BP-7.1 FOR ALL OTHER DETAILS

Calculated NDS
Checked CJT

CURB RAMP DETAILS

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CR-12

Drawing File: O:\2022\2022267100 - Belmont Ave Sidewalks Phase 1\INTA\Design\Sheets\2022267100cr-1.dwg Layout: CR-12
Date: Jan 28, 2025 Time: 11:34 am Twist: -1.57079633
Technician: nshaffer

NOTIFICATION

THE CONTRACTOR SHALL GIVE THE ODOT DISTRICT 4 TRAFFIC OFFICE, (330) 786-2267, 10 WORKING DAYS NOTICE PRIOR TO THE NEW SIGNAL BEING PLACED INTO OPERATION.

THE SIGNAL INSTALLATION SHALL BE INSPECTED BY ODOT DISTRICT 4 TRAFFIC PERSONNEL. ALL DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR AND APPROVED BY THE DISTRICT TRAFFIC OFFICE.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND THE DISTRICT 4 TRAFFIC ENGINEER WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 120 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY.

EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLER, CABINET, UNINTERRUPTIBLE POWER SUPPLY, VEHICLE DETECTION EQUIPMENT, LED LAMP UNITS, NETWORK AND COMMUNICATION/INTERCONNECT EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE DEPARTMENT OF TRANSPORTATION FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

DETECTION MAINTENANCE

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND DISTRICT 4 TRAFFIC ENGINEER.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE DISTRICT TRAFFIC ENGINEER SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NONINTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDONED, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, CABINET INSTALLATION ETC). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND DISTRICT 4 TRAFFIC ENGINEER. THE DISTRICT TRAFFIC ENGINEER WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE DISTRICT 4 TRAFFIC ENGINEER AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY THE DESIGNATED PERSONNEL PRIOR TO FINAL ACCEPTANCE. ODOT FORCES SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.

   A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.

   B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.

   C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.

   D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.

   E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.

   F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.

   A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.

   B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.

   C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

   D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.

   A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:

      I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
      II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
      III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
      IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.

   B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.

   A. A 3/4-INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.

   B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

GROUNDING AND BONDING (CONT.)

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.

   A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.

   B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.

      i. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
      ii. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC-) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT - ALL MATERIALS AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

UNDERDRAINS FOR PULL BOXES

REFERENCE TRAFFIC SCD HL-30.11 FOR DETAILS ABOUT DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED 20 FEET. THE FOLLOWING ESTIMATED QUANTITY IS CARRIED TO THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 611 - 4" CONDUIT, TYPE E..... 40 FT.

ITEM 625 - UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN

UNDERGROUND WARNING/MARKING TAPE SHALL BE IN ACCORDANCE WITH C&MS 725.22 EXCEPT THE TAPE SHALL NOT BE FURNISHED WITH TRACER WIRE AND THE REQUIRED MINIMUM BREAK STRENGTH SHALL BE WAIVED.

ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING PUSHBUTTON SIGNAGE, SIGNAL HEADS, CABLE, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE REUSED AS PART OF A NEW INSTALLATION ON THE PROJECT OR STORED ON THE PROJECT FOR SALVAGE BY THE TRUMBULL COUNTY. THE CONTRACTOR SHALL CONTACT TRUMBULL COUNTY, (330) 675-2640, TO DETERMINE A DELIVERY LOCATION FOR SALVAGED EQUIPMENT.

ITEMS TO BE STORED
4 - PEDESTRIAN PUSHBUTTONS

ITEMS TO BE REMOVED
4 - PUSHBUTTON SIGNS
LUMP - SIGNAL CABLE

ALL REMAINING HOLES LEFT FROM THE REMOVAL OF PEDESTRIAN SIGNS AND PUSHBUTTONS SHALL BE PLUGGED WITH A WATER TIGHT SEAL AND FINISHED TO MATCH THE SURFACE OF THE SUPPORT POLE.

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE TRUMBULL COUNTY ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

TRAFFIC SIGNAL REMOVAL AND INSTALLATION

ALL WORK SHALL BE PERFORMED BY AN ODOT PREQUALIFIED SIGNAL CONTRACTOR.

N

Calculated JAH
Checked KMG

TRAFFIC SIGNAL NOTES

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CP-1

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1\MKTA\Design\01 - Signal\Sheets\2022267.CN001.dwg Layout: SIGNAL NOTES
Date: May 09, 2025 Time: 1:38 pm Twist: -1.57079633
Technician: nshaffer

ITEM 632 - SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE

THE CONTRACTOR SHALL REMOVE EXISTING MESSENGER WIRE LASHING RODS AND REINSTALL THEM AS NECESSARY FOR THE INSTALLATION OF ANY NEW CABLES ON THE EXISTING INTERSECTION SIGNAL SPANS. THE CABLES SHALL ENTER THE EXISTING STRAIN POLE THROUGH THE POLE CABLE ENTRANCE FITTING AND USE THE EXISTING CONDUIT SYSTEM TO GET TO THE CONTROLLER CABINET. THE NEW CABLES SHALL BE SUPPORTED BY A NEW CABLE SUPPORT ASSEMBLY AT THE TOP OF THE STRAIN POLE.

THE NEW SIGNAL CABLES SHALL BE BID BY SEPARATE BID ITEMS.

PAYMENT FOR ITEM 632 - SIGNALIZATION MISC.: UNLASH AND RELASH MESSENGER WIRE SHALL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT AND SHALL INCLUDE ALL LABOR, MATERIALS, CABLE SUPPORT ASSEMBLIES AND EQUIPMENT TO INSTALL NEW CABLES ON EXISTING SIGNAL SPAN WIRE INSTALLATIONS.

ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732 THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU F GALVANIZED STEEL OR ALUMINUM.
4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED.
6. THE LIGHT EMITTING DIODE (LED) MODULES SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE ODOT, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEADS FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE AS NECESSARY.

ITEM 632 - ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN

THE PROVIDED PUSHBUTTONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF C&MS 632.09 AND 732.06 AND SECTIONS 4E.09-4E.13 OF THE OMUTCD.

THE CONTRACTOR SHALL PROVIDE ONE (1) CENTRAL CONTROL UNIT PER INTERSECTION. THE CENTRAL CONTROL UNIT SHALL BE PAID FOR UNDER A SEPARATE PAY ITEM.

THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIAL COSTS ASSOCIATED WITH THE PROVISIONS AND INSTALLATION OF THE PUSHBUTTON AS OUTLINED ABOVE. PAYMENT FOR THIS WORK SHALL BE AT THE CONTRACT UNIT PRICE FOR ITEM 632 - ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN AND WILL BE MEASURED BY THE NUMBER OF COMPLETE UNITS FURNISHED, INSTALLED AND ACCEPTED.

ITEM 632 - SIGNALIZATION, MISC.: ACCESSIBLE PEDESTRIAN PUSHBUTTON CENTRAL CONTROL UNIT

THE CONTRACTOR SHALL INSTALL A PUSHBUTTON CENTRAL CONTROL UNIT THAT IS MANUFACTURED BY THE SAME MANUFACTURER AS THE ACCESSIBLE PEDESTRIAN PUSHBUTTONS. THE UNIT POWER SUPPLY, ALL CONNECTOR CABLES, INTERCONNECT BOARD AND PROGRAMMING BY THE VENDOR SHALL BE PROVIDED AND PAID FOR UNDER THIS PAY ITEM.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER EACH, COMPLETE AND IN PLACE, INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 633 - CONTROLLER ITEM, MISC.: CONTROLLER MODIFICATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING THE EXISTING CONTROLLER TO INCORPORATE THE CHANGES IN THE DETAILED TRAFFIC SIGNAL PLANS AT BELMONT AVE. / CHURCHILL HUBBARD RD. AND BELMONT AVE. / I-80 WB RAMP INTERSECTION. THESE CHANGES SHALL INCLUDE, BUT ARE NOT LIMITED TO, INSTALLING NEW LOAD SWITCHES AND UPDATING THE EXISTING CONTROLLER WITH THE NEW TIMINGS PROVIDED.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO MODIFY THE CONTROLLER AS INDICATED IN THE PLANS AND RETURN THE TRAFFIC SIGNAL TO A FULLY OPERATIONAL STATUS.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.
2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE CRASH THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE LIBERTY TOWNSHIP POLICE DEPARTMENT AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED FOUR HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:00AM TO 9:00AM AND 3:00PM TO 6:00PM, MONDAY THROUGH FRIDAY. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS, EXCEPT FOR THE FOLLOWING INTERSECTIONS WHICH SHALL BE PROTECTED BY OFF-DUTY LIBERTY TOWNSHIP POLICE, HIRED BY THE CONTRACTOR.

1. BELMONT AVE. / I-80 WB RAMP
2. BELMONT AVE. / CHURCHILL HUBBARD RD.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION (CONT.)

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

N

Calculated JAH
Checked KMG

TRAFFIC SIGNAL NOTES

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CP-2

Drawing File: O:\2022\2022287\00 - Belmont Ave Sidewalks Phase 1\META\Design\01 - Signals\Sheets\2022287.CN001.dwg Layout: SIGNAL NOTES (2)
Date: May 09, 2025 Time: 1:45 pm Twist: -1.570796833
Technician: nshaffer

SHEET	LOCATION	625 CONDUIT, 2", 725.04	625 TRENCH	625 PULL BOX, 725.08, 18"	625 GROUND ROD	625 UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	632 ACCESSIBLE PEDESTRIAN PUSHBUTTON, AS PER PLAN	632 COVERING OF PEDESTRIAN SIGNAL HEAD	632 SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	632 PEDESTAL FOUNDATION	632 LOOP DETECTOR LEAD-IN CABLE	632 PEDESTAL, 8', TRANSFORMER BASE	632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	632 SIGNALIZATION, MISC.: ACCESSIBLE PEDESTRIAN PUSHBUTTON CENTRAL CONTROL UNIT	632 SIGNALIZATION, MISC.: UNLASH AND RELASH MESSENGER WIRE	633 CONTROLLER ITEM, MISC.: CONTROLLER MODIFICATIONS
		FT	FT	EACH	EACH	FT	EACH	EACH	EACH	FT	EACH	FT	EACH	EACH	EACH	FT	EACH
CP-4	BELMONT AVE. / I-80 WB RAMP	40	40		2	40	4	4	4	602	2	594	2		1	211	1
CP-6	BELMONT AVE. / CHURCHILL HUBBARD RD.	87	87	2	3	87	4	4	4	849	3	841	3	1	1	222	1
TOTALS CARRIED TO GENERAL SUMMARY		127	127	2	5	127	8	8	8	1451	5	1435	5	1	2	433	2

SHEET NO.	REF. NO.	LOCATION	STATION FROM	STATION TO	SIDE	CODE	SIZE (INCHES)	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED	630 SIGN, FLAT SHEET	642 STOP LINE, TYPE 1	642 CROSSWALK, 12", TYPE 1	642 CROSSWALK, 24", TYPE 1
								EACH	SF	FT	FT	FT
CP-4	CW	BELMONT AVE.	-0+31		LT						179	
CP-4	CW	BELMONT AVE.	0+23		LT/RT							104
CP-4	SL	BELMONT AVE.	0+37		LT/RT					34		
CP-4	S-1	BELMONT AVE.	EX. SP-2		LT	R9-3-18	18 X 18	1	2.3			
CP-4	S-2	BELMONT AVE.	EX. SP-3		RT	R9-3-18	18 X 18	1	2.3			
CP-4	S-3	BELMONT AVE.	EX. SP-4		RT	R9-3-18	18 X 18	1	2.3			
CP-4	S-4	BELMONT AVE.	EX. SP-4		RT	R9-3-18	18 X 18	1	2.3			
CP-6	CW	BELMONT AVE.	16+23		LT/RT							144
CP-6	CW	BELMONT AVE.	15+79		RT							126
CP-6	SL	BELMONT AVE.	15+15		RT					42		
CP-6	S-5	BELMONT AVE.	EX. SP-1		LT	R9-3-18	18 X 18	1	2.3			
CP-6	S-6	BELMONT AVE.	EX. SP-2		LT	R9-3-18	18 X 18	1	2.3			
CP-6	S-7	BELMONT AVE.	EX. SP-2		LT	R9-3-18	18 X 18	1	2.3			
CP-6	S-8	BELMONT AVE.	EX. SP-4		RT	R9-3-18	18 X 18	1	2.3			
TOTALS CARRIED TO GENERAL SUMMARY								8	18.4	76	179	374

Calculated JAH
Checked KMG

TRAFFIC SIGNAL SUBSUMMARY

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CP-3

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1\MTA\Design\01 - Signals\Sheets\2022267.CS001.dwg Layout: SUBSUMMARIES
Date: May 09, 2025 Time: 1:43 pm Twist: -1.57079633
Technician: nshaffer

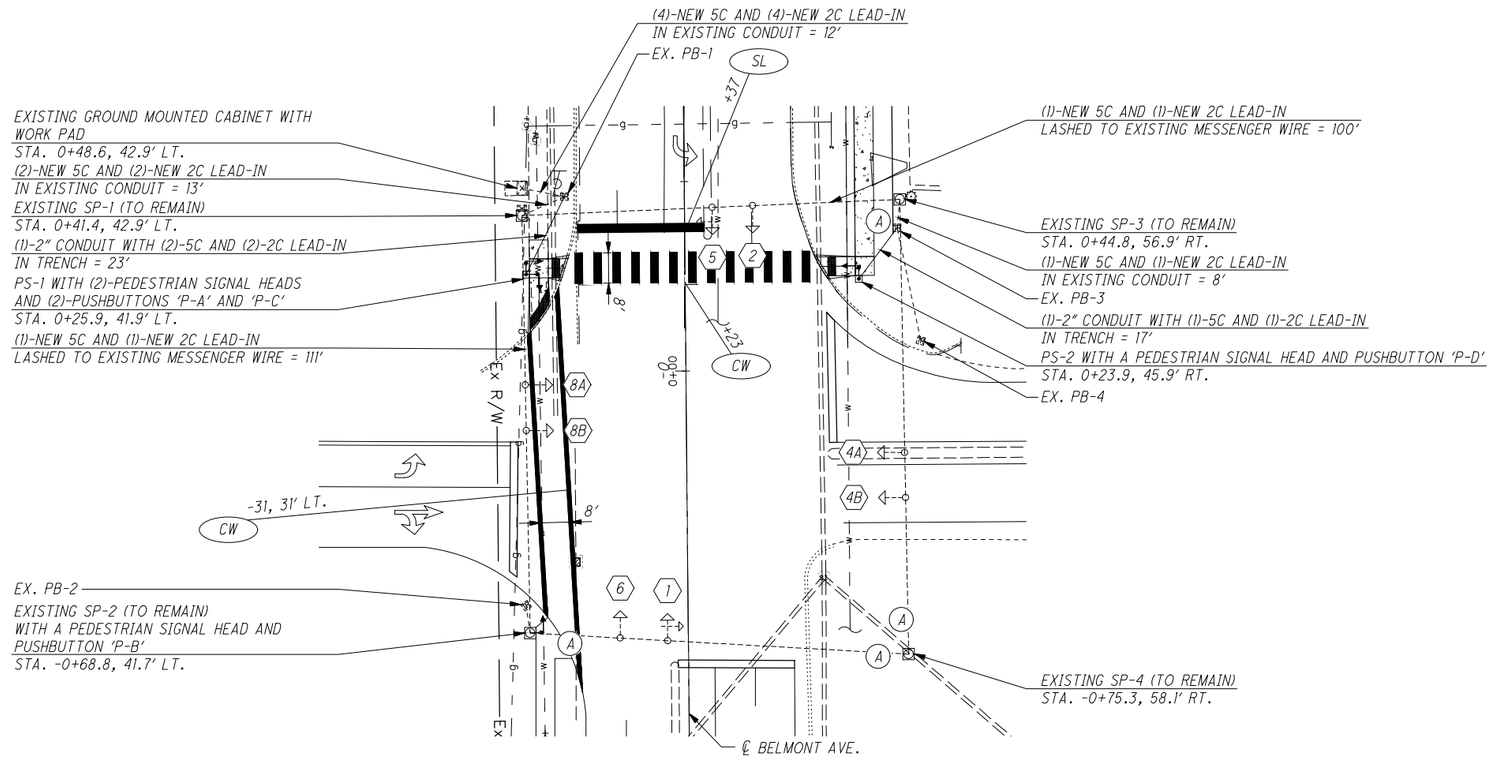
ITEM 646 - REMOVAL OF PAVEMENT MARKINGS

THE CONTRACTOR SHALL GRIND THE EXISTING CONFLICTING PAVEMENT MARKINGS. THE FOLLOWING LIMITS SHALL BE USED WHEN REMOVING THE EXISTING CONFLICTING PAVEMENT MARKINGS:

CROSSWALK LINE	
-STA. -0+29	163 FT
STOP LINE	
-STA. 0+23	33 FT
CHANNELIZING LINE	
-STA. 0+23 TO 0+37	14 FT
LANE LINE	
-STA. 0+23 TO 0+37	14 FT
EDGE LINE	
-STA. 0+15 TO 0+28	13 FT

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

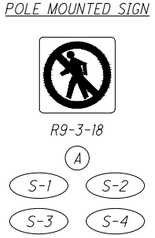
ITEM 646 - REMOVAL OF PAVEMENT MARKING	237 FT



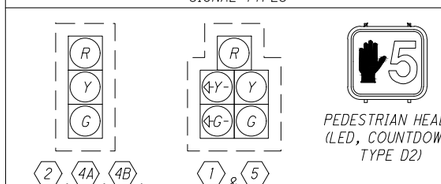
PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
EX. PB-1	0+46.3	LT	31.6'	EX.
EX. PB-2	-0+61.6	LT	42.8'	EX.
EX. PB-3	0+37.2	RT	56.1'	EX.
EX. PB-4	0+07.5	RT	62.1'	EX.

POLE MOUNTED SIGN



SIGNAL TYPES



PEDESTRIAN SIGNS

2 - LEFT ARROWS (PS-1, PS-1)
2 - RIGHT ARROWS (EX. SP-2, PS-2)

LEGEND

	EXIST.	PROP.
SIGNAL SUPPORT POLE		
PEDESTAL SUPPORT		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		
PULL BOX		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSHBUTTON		
CONTROLLER CABINET WITH WORK PAD		
STOP LINE		SL
CROSSWALK LINE		CW
PROPOSED SIGN LABEL		S-1
PROPOSED SIGN		

NOTES:
1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL EQUIPMENT PRIOR TO EXCAVATION.
2. PEDESTRIAN SIGNAL HEADS, PUSHBUTTONS, AND ASSOCIATED SIGNS SHALL BE MOUNTED PER SCD TC-85.10 ON THE SUPPORT POLE.
3. EXISTING CONDUIT LOCATIONS SHALL BE CONSIDERED APPROXIMATE AND ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLING ANY UNDERGROUND CABLE.

N

0 10 20 40
Horizontal Scale in Feet

Calculated JAH
Checked KMG

TRAFFIC SIGNAL PLAN
BELMONT AVE. / I-80 WB RAMP

Liberty Township
Belmont Avenue Sidewalks
Phase 1

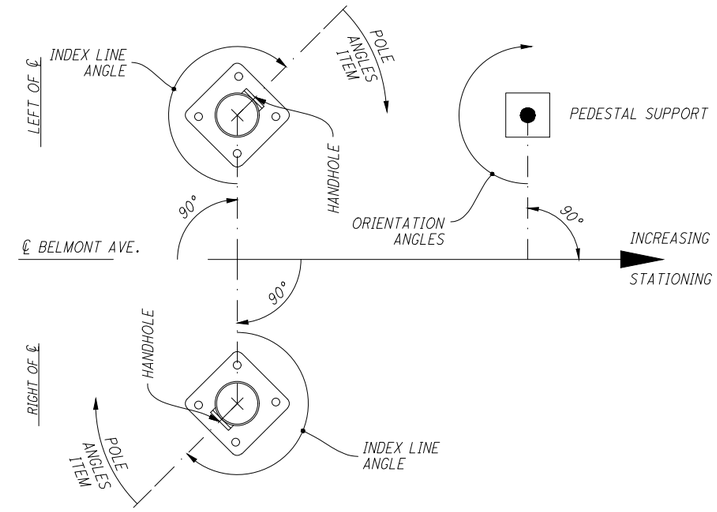
CP-4

Drawing File: C:\2022\2022267\100 - Belmont Ave Sidewalks Phase 1\NWTA\Design\01 - Signal\Sheets\2022267_CP002.dwg Layout: BELMONT & I-80 WEST
Date: May 09, 2025 Time: 1:42 pm Twist: -1.5707963
Technician: nshaffer

SIGNAL TIMING CHART

INTERSECTION: BELMONT AVE. / I-80 WB RAMP MAINTAINING AGENCY: OHIO DEPARTMENT OF TRANSPORTATION								
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		SB LT	NB	-	EB	NB LT	SB	-	WB
YELLOW CHANGE	(SEC.)	3.6	4.5	-	3.5	3.6	4.5	-	3.5
ALL RED CLEARANCE	(SEC.)	1.7	1.0	-	1.1	1.7	1.0	-	1.1
WALK	(SEC.)	-	-	-	-	-	9	-	7
PEDESTRIAN CLEARANCE	(SEC.)	-	-	-	-	-	20	-	17

NOTE: THE CONTRACTOR SHALL PROGRAM THE ABOVE TIMINGS INTO THE CONTROLLER. ALL OTHER TIMINGS SHALL REMAIN AS CURRENTLY PROGRAMMED.



POLE ORIENTATION

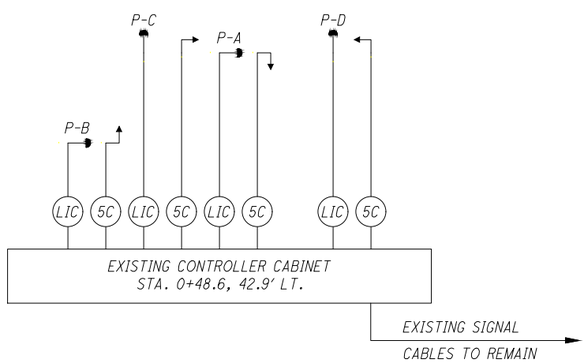
FIELD WIRING HOOK-UP CHART

PEDESTRIAN MOVEMENTS			
PED A	W	ϕ6 PED / LS 15 G	OUT
	DW	ϕ6 PED / LS 15 R	
PEB B	W	ϕ8 PED / LS 16 G	OUT
	DW	ϕ8 PED / LS 16 R	

PEDESTAL TABLE

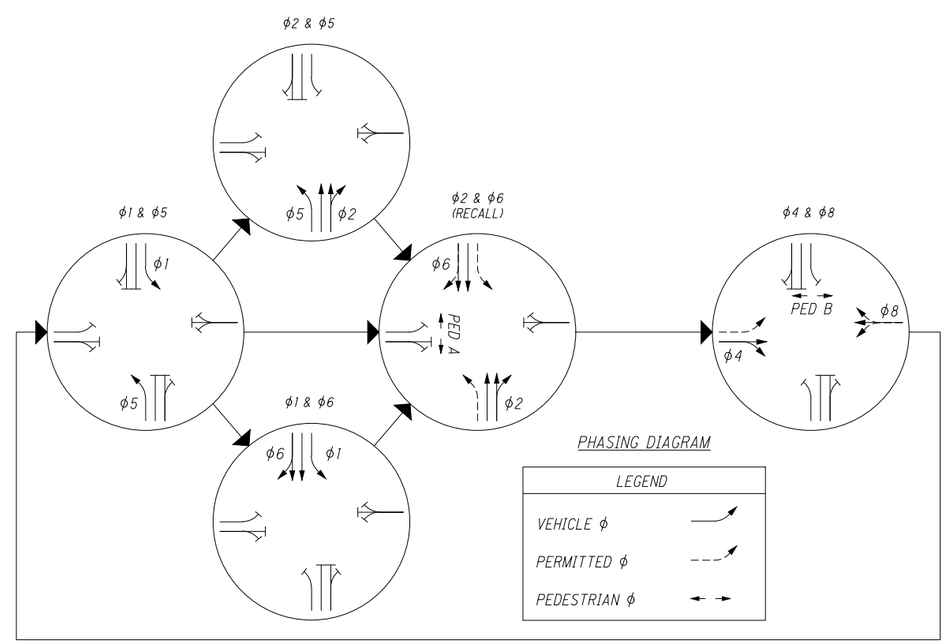
SUPPORT NO.	STATION	OFFSET	POLE HEIGHT	ORIENTATION ANGLES FROM INDEX LINE		
				PEDESTRIAN SIGNAL	PEDESTRIAN PUSHBUTTON	HANDHOLE
			FT	DEG	DEG	DEG
EX. SP-2	-0+68.8	41.7' LT.	EX.	0	0	EX.
PS-1	0+25.9	41.9' LT.	8	0 / 270	0 / 270	180
PS-2	0+23.9	45.9' RT.	8	90	90	180

WIRING DIAGRAM



LEGEND

	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSHBUTTON
LIC	2/C NO. 14 AWG (LEAD-IN CABLE)
5C	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG



PHASING DIAGRAM

LEGEND	
VEHICLE ϕ	
PERMITTED ϕ	
PEDESTRIAN ϕ	

Calculated JAH
Checked KMG

TRAFFIC SIGNAL PLAN
BELMONT AVE. / I-80 WB RAMP

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CP-5

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1\MRTA\Design\01 - Signal\Sheets\2022267.C0020.dwg Layout: BELMONT & I-80 WEST DETAIL
Date: May 09, 2025 Time: 1:38 pm Twist: -1.57079633
Technician: nshaffer

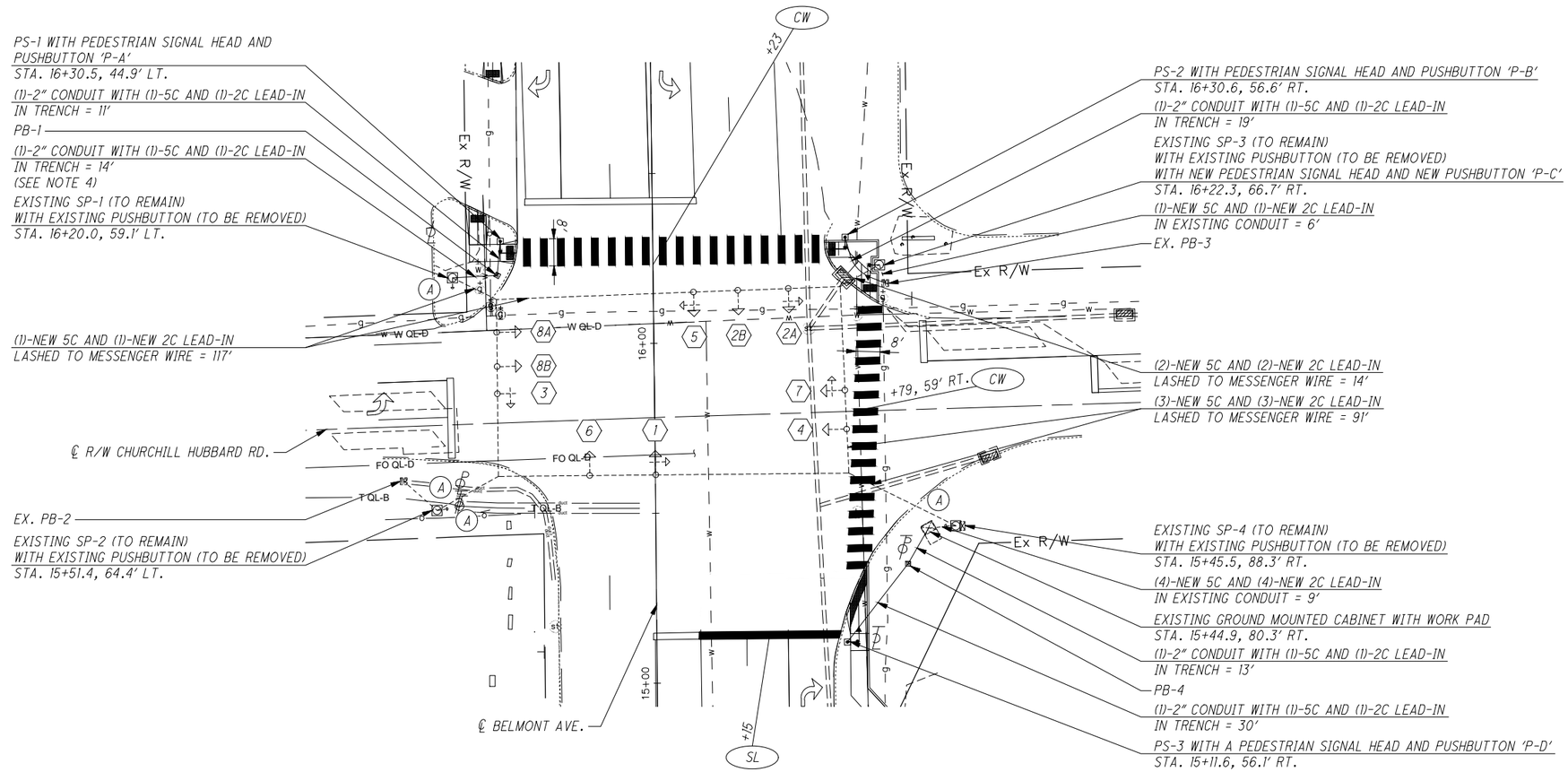
ITEM 646 - REMOVAL OF PAVEMENT MARKINGS

THE CONTRACTOR SHALL GRIND THE EXISTING CONFLICTING PAVEMENT MARKINGS. THE FOLLOWING LIMITS SHALL BE USED WHEN REMOVING THE EXISTING CONFLICTING PAVEMENT MARKINGS:

STOP LINE	
-STA. 15+30	47 FT
CHANNELIZING LINE	
-STA. 15+15 TO 15+30	15 FT
-STA. 15+15 TO 15+30	15 FT
LANE LINE	
-STA. 15+15 TO 15+30	15 FT

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 646 - REMOVAL OF PAVEMENT MARKING	92 FT



POLE MOUNTED SIGN

R9-3-18

A

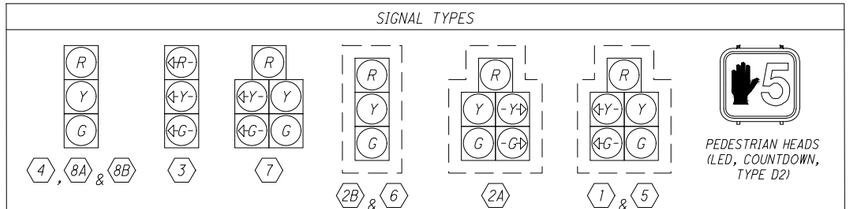
S-5 S-6

S-7 S-8

PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	16+20.6	LT	45.9'	18 X 18
EX. PB-2	15+60.1	LT	74.1'	EX.
EX. PB-3	16+16.9	RT	68.3'	EX.
PB-4	15+34.5	RT	74.2'	18 X 18

SIGNAL TYPES



PEDESTRIAN SIGNS

R10-3E-9

1 - LEFT ARROW (PS-2)
3 - RIGHT ARROWS (EX. SP-3, PS-1, PS-3)

LEGEND

	EXIST.	PROP.
SIGNAL SUPPORT POLE		
PEDESTAL SUPPORT		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"		
TRAFFIC SIGNAL, 5 UNIT HEAD, 12"		
PULL BOX		
PEDESTRIAN SIGNAL		
PEDESTRIAN PUSHBUTTON		
CONTROLLER CABINET WITH WORK PAD		
STOP LINE		SL
CROSSWALK LINE		CW
PROPOSED SIGN LABEL		S-1
PROPOSED SIGN		

NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL EQUIPMENT PRIOR TO EXCAVATION.
2. PEDESTRIAN SIGNAL HEADS, PUSHBUTTONS, AND ASSOCIATED SIGNS SHALL BE MOUNTED PER SCD TC-85.10 ON THE SUPPORT POLE.
3. EXISTING CONDUIT LOCATIONS SHALL BE CONSIDERED APPROXIMATE AND ARE TO BE VERIFIED BY THE CONTRACTOR PRIOR TO INSTALLING ANY UNDERGROUND CABLE.
4. THE CONTRACTOR SHALL CONNECT THE PROPOSED CONDUIT INTO AN EXISTING CONDUIT ELL AT THE STRAIN POLE AND ROUTE THE PROPOSED SIGNAL CABLES THROUGH THE POLE TO THE MESSENGER WIRE.

N

0 10 20 40
Horizontal Scale in Feet

Calculated JAH
Checked KMG

TRAFFIC SIGNAL PLAN
BELMONT AVE. / CHURCHILL HUBBARD RD.

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CP-6

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1\MITIA\Design\01 - Signals\Sheets\2022267_CP001.dwg Layout: BELMONT & CHURCHILL
Date: May 09, 2025 Time: 1:40 pm Twist: -15.7079633
Technician: nshaffer

SIGNAL TIMING CHART

INTERSECTION: BELMONT AVE. / CHURCHILL HUBBARD RD. MAINTAINING AGENCY: OHIO DEPARTMENT OF TRANSPORTATION								
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		SB LT	NB	WB LT	EB	NB LT	SB	EB LT	WB
YELLOW CHANGE	(SEC.)	4.8	5.7	3.9	4.9	4.8	5.7	3.9	4.9
ALL RED CLEARANCE	(SEC.)	2.3	1.0	3.3	1.0	2.3	1.0	3.3	1.0
WALK	(SEC.)	-	10	-	-	-	-	-	7
PEDESTRIAN CLEARANCE	(SEC.)	-	19	-	-	-	-	-	22

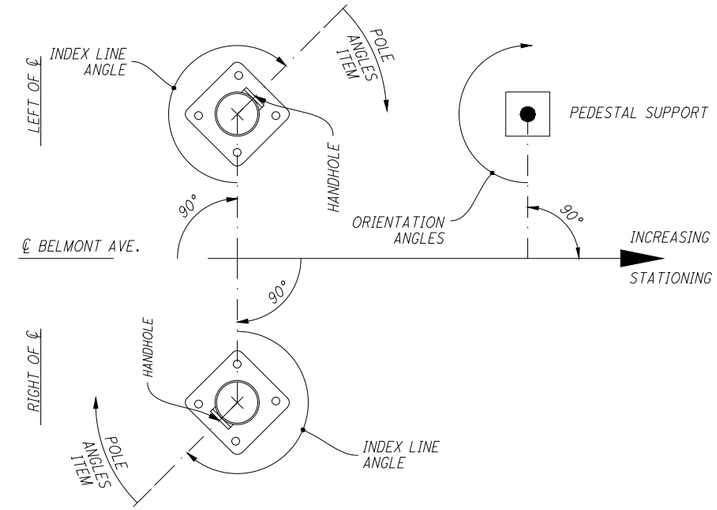
NOTE: THE CONTRACTOR SHALL PROGRAM THE ABOVE TIMINGS INTO THE CONTROLLER. ALL OTHER TIMINGS SHALL REMAIN AS CURRENTLY PROGRAMMED.

FIELD WIRING HOOK-UP CHART

PEDESTRIAN MOVEMENTS			
PED A	W	ϕ2 PED / LS 13 G	OUT
	DW	ϕ2 PED / LS 13 R	
PED B	W	ϕ8 PED / LS 16 G	OUT
	DW	ϕ8 PED / LS 16 R	

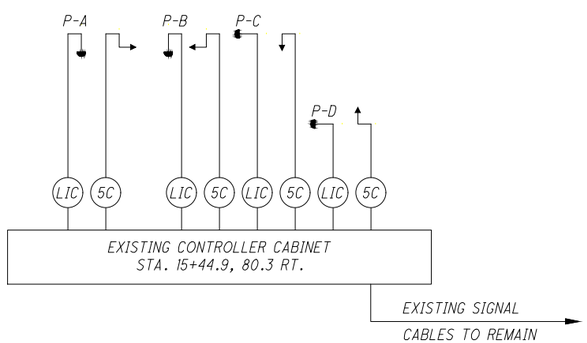
PEDESTAL TABLE

SUPPORT NO.	STATION	OFFSET	POLE HEIGHT	ORIENTATION ANGLES FROM INDEX LINE		
				PEDESTRIAN SIGNAL	PEDESTRIAN PUSHBUTTON	HANDHOLE
			FT	DEG	DEG	DEG
EX. SP-3	16+22.3	66.7' RT.	EX.	180	180	EX.
PS-1	16+30.5	44.9' LT.	8	90	90	180
PS-2	16+30.6	56.6' RT.	8	270	270	180
PS-3	15+11.6	56.1' RT.	8	180	180	180



POLE ORIENTATION

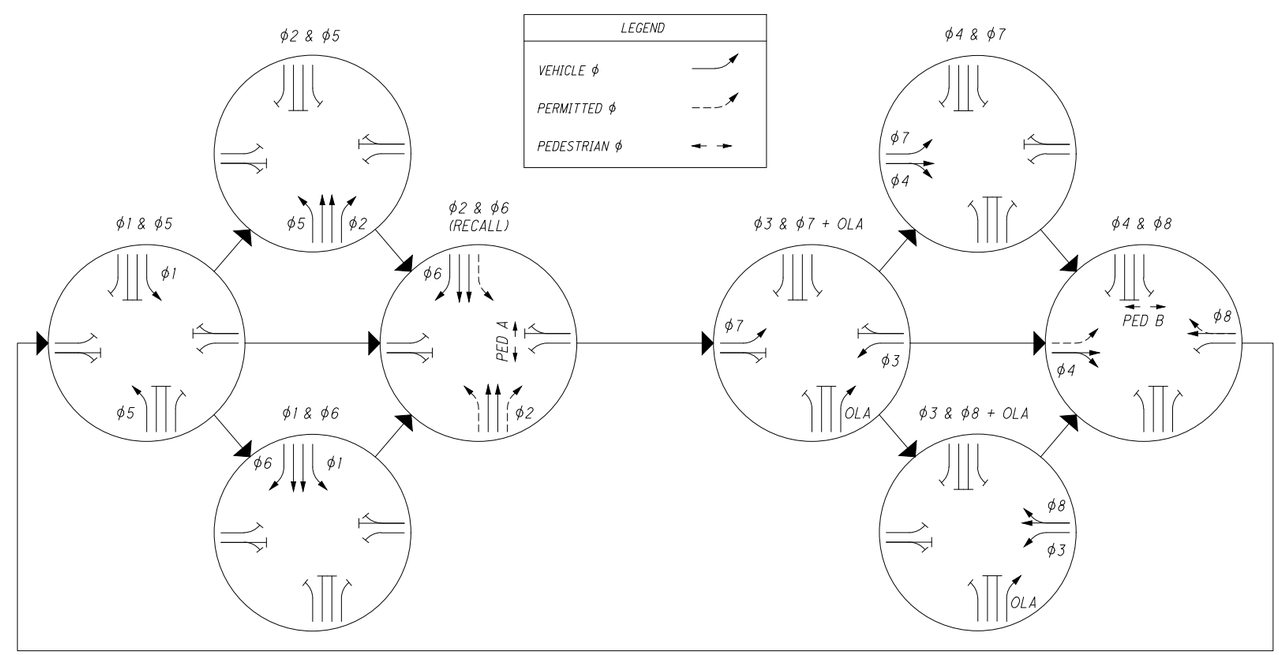
WIRING DIAGRAM



LEGEND

- PEDESTRIAN SIGNAL HEAD
- PEDESTRIAN PUSHBUTTON
- LIC — 2/C NO. 14 AWG (LEAD-IN CABLE)
- 5C — SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG

PHASING DIAGRAM



Calculated JAH
Checked KMG

TRAFFIC SIGNAL PLAN
BELMONT AVE. / CHURCHILL HUBBARD RD.

Liberty Township
Belmont Avenue Sidewalks
Phase 1

CP-7

Drawing File: O:\2022\2022267\00 - Belmont Ave Sidewalks Phase 1 (WRTA)\Design\01 - Signal\Sheets\2022267.CD010.dwg Layout: BELMONT & CHURCHILL DETAIL
Date: May 09, 2025 Time: 1:37 pm Twist: -1.570796331
Technician: nshaffer