

# STATE OF OHIO DEPARTMENT OF TRANSPORTATION WYA-CAREY STREETSCAPE PHASE 1

## VILLAGE OF CAREY WYANDOT COUNTY

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### PROJECT DESCRIPTION

IMPROVEMENT OF 0.26 MILES OF FINDLAY STREET (S.R. 103, S.R. 199, S.R. 568) AND 0.02 MILES OF VANCE STREET (U.S. 23, S.R. 103), INCLUDING STREETSCAPE, EXPANDED SIDEWALKS, NEW CURBS, WATERMAINS, STORM SEWER, STORM CULVERT, RESURFACING, BURIED ELECTRIC LINES, STREET LIGHTS, TRAFFIC SIGNALS, PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS.

#### EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED	0.27	ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AR	REA: 0.36	ACRE
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A	
	(NOI	NOT REQUIRED)

#### 2008 SPECIFICATIONS

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

THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 12 OF 87 FOR FINDLAY ST. CULVERT REPLACEMENT ONLY. FOR ALL OTHER CONSTRUCTION, PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

DATE

80760

APPROVED BY: DISTRICT DEPUTY DIRECTOR

5-9-08 DATE

PROVED BY: DIRECTOR, DEPARTMENT OF TRANSPORTATION

5-27-08

STANDARD CONSTRUCTION DRAWINGS				SUPP	LEMENTAL		
DRAWING No.	No. DATE DRAW		DATE	DRAWING No.	DATE	SPECI	FICATIONS
BP-3.1	7-16-04	HL-40.20	1-19-07	TC-16.20	1-19-07	800-20	008 4-18-08
BP-4.1	7-16-04	HL-60.11	1-19-07	TC-21.20	1-19-07	802	4-15-05
BP-5.1	7-28-00	HL-60.12	10-19-07	TC-22.10	1-19-01	815	1-19-07
BP-7.1	1-19-07	HL-60.31	1-19-07	TC-41.41	1-19-01	832	4-25-06
CB-1.1	7-15-05	MH-1.2	1-20-06	TC-81.20	1-16-04	872	4-21-06
CB-2.1	7-15-05	MT-97.10 M	9-5-06			906	1-19-07
CB-2.2	7-15-05	MT-97.11 M	9-5-06	TC-82.10	4-19-02		
HL-10.12	1-19-07	MT-105.10 M	10-18-02	TC-83.10	1-19-07	SPE	CIAL
HL-20.11	1-19-07	MT-105.11 M	10-18-02	TC-83.20	1-19-07	PROV	ISIONS
HL-30.11	1-21-05			TC-85.10	4-19-02	NWP#3	11-13-07
HL-30.21	1-19-07	RM-1.1	4-21-06	TC-85.20	5-01-00		
HL-30.22	1-21-05	RM-4.2	10-20-06				

LOCATION MAP

Portion to be improved State & Federal Roads Local Roads

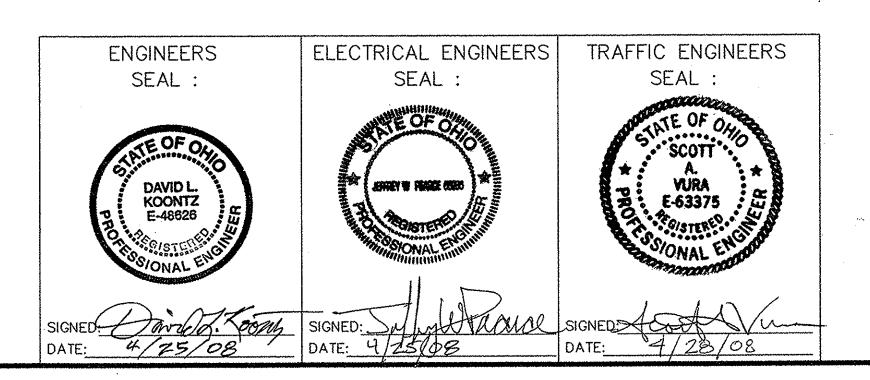
### DESIGN DESIGNATION

·	<u>FINDLAY</u>	<u>VANCE</u>
OPENING YEAR (2008) ADT	7190	
DESIGN YEAR (2028) ADT	8570	6670
DESIGN HOURLY VOLUME (2008)	. 857	667
DIRECTIONAL DISTRIBUTION	55%	
T <sub>24</sub>	. 8%	24%
T <sub>D</sub>	5%	
DESIGN SPEED		
LEGAL SPEED	25 MPH	
FUNCTIONAL CLASSIFICATION	URBAN A	RTERIAL URBAN ARTERIAL
DESIGN EXCEPTIONS	. NONE RE	QUIRED

UNDERGROUND UTILITIES 2 WORKING DAYS AND 2 WORKING DAYS
BEFORE YOU DIG 1-800-362-2764 OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY 1-800-925-0988 OIL & GAS PRODUCERS
UNDERGROUND PROTECTION SERVICE

PLANS PREPARED BY

ENGINEERS, INC. PRACTICAL INNOVATION, BY DESIGN™ AKRON, OHIO



Z: \E06014 CAREY VIP FINAL\01 TITLE.dwg

VERTICAL SCALE

BENCHMARK: TOP OF CATCH BASIN IN CAREY PARK STA. 14+00±, 79.94' RT EL.=820.82

#### TRAFFIC DATA

OPENING YEAR A.D.T. (2008) = 7,190DESIGN YEAR A.D.T. (2028) = 8,570TRUCK (24 HOUR B&C) = 8%

#### HYDRAULIC DATA

DRAINAGE AREA = 5.63 SQ MI

EXISITING WATERWAY OPENING 40 S.F. PROPOSED WATERWAY OPENING 92 S.F. <u>25 YEAR</u> <u>100 YEAR</u> Q = 561 C.F.S.Q = 449 C.F.S.V = 8.9 FT./SEC.V = 9.4 FT./SEC.HW = 816.3HW = 815.55HW25 IS 4.45 FEET BELOW EDGE OF PAVEMENT.

LATITUDE: N40°57'08" LONGITUDE: W83°22'50"

#### **EXISTING STRUCTURE**

TYPE: 8' SPAN x 5' RISE REINFORCED CONCRETE BOX CULVERT ROADWAY: 61.22' F/F CURBS ALIGNMENT: TANGENT SKEW: 27°16' R.F. LOADING: UNKNOWN APPROACH SLABS: NONE WEARING COURSE: ASPHALT CONCRETE STRUCTURE FILE NUMBER: NA

#### PROPOSED STRUCTURE

TYPE: 20' SPAN x 4'-3" RISE TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT (4.6' EFFECTIVE RISE) ROADWAY: 46.29' F/F CURBS ALIGNMENT: TANGENT SKEW: 27°16' L.F. LOADING: HS 25 AND ALT MILITARY APROACH SLABS: NONE WEARING COURSE: ASPHALT CONCRETE

	PROJECT DATA	
•	TOTAL AREA (RIGHT-OF-WAY)	3.42 AC
	PROJECT EARTH DISTURBING ACTIVITIES (	0.27 AC
	ESTIMATING CONTRACTORS EARTH DISTURBED AREA	0.38 AC
•	NOI EARTH DISTURBED AREA	N/A
	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.9
	RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.9
	IMPERVIOUS AERA, PRE-CONSTR	- 3.20 AC.
	IMPERVIOUS AREA, POST-CONSTR	3.33 AC.
	SOIL & WATER CONSERVATION MAP	6 & 7
	U.S.G.S. 7.5 QUAD. MAP	CAREY
_	SUBSEQUENT RECEIVING WATERS	SANDUSKY RIVER

FINDL



COL NOIL

STREET Demolit

**DESIGN LOADING:** 

HS25 AND THE ALTERNATE MILITARY LOADING. FWS = 60 PSF

DESIGN STRESSES:
CAST-IN-PLACE STRUCTURES

CONCRETE CLASS S - f'c = 4,500 psi FLAT-TOPPED THREE SIDED CULVERT SECTION CONCRETE CLASS C - f'c = 4,000 psi FOOTING REINFORCING STEEL - ASTM A615, A616, OR A617

Fy - 60,000 psi.

PRECAST STRUCTURES: FOR PRECAST REINFORCED CONCRETE FLAT-TOPPED THREE SIDED CULVERTS, SEE CMS SECTION 603.

PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:
WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE
REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER.

THE CONTRACTOR SHALL SAW CUT AND CAREFULLY REMOVE ONLY AS MUCH OF THE EXISTING 8'X5' BOX CULVERT AS IS NECESSARY TO INSTALL THE PROPOSED STRUCTURE.

#### **UTILITY LINES:**

ALL EXPENSES INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNER(S). THE CONTRACTOR AND OWNER(S) ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM. THE WATER LINE WORK IS PART OF THIS PROJECT

#### UNCLASSIFIED EXCAVATION:

EXCAVATION LIMITS FOR THE PROPOSED STRUCTURE SHALL BE AS DEFINED IN 503.11. EXCAVATION OUTSIDE THESE LIMITS NECESSARY TO REMOVE THE EXISTING STRUCTURE SHALL BE INCLUDED IN 503 FOR PAYMENT.

#### THREE-SIDED CULVERT WALL AND TOP SLAB THICKNESS:

THE WALL AND TOP SLAB THICKNESS SHOWN ON THE PLANS WERE OBTAINED FROM THE MANUFACTURERS AT THE TIME THE PLANS WERE PREPARED. IF THE WALL AND/OR TOP SLAB THICKNESS OF THE CULVERT PROPOSED ARE DIFFERENT FROM WHAT IS SHOWN ON THE PLANS, A MARKED COPY OF THE PROJECT PLANS, INCLUDING ALL PLAN NOTES AND DETAILS SHOWING ALL ITEMS AFFECTED BY THE DIFFERENT CULVERT DIMENSIONS, SHALL BE SUBMITTED TO THE PROJECT ENGINEER, AND CONCURRENTLY TO THE OFFICE OF STRUCTURAL ENGINEERING, FOR APPROVAL WITH THE SHOP DRAWINGS. ALL WORK REQUIRED TO ACCOMMODATE ANY REVISED DIMENSIONS SHALL BE AT NO EXTRA COST TO THE STATE.

#### ITEM 503 - COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN

TO PROTECT THE STRUCTURAL INTEGRITY OF THE EXISTING ADJACENT PROPERTIES DURING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL SHORING ALONG THE WORK LIMITS IN EACH QUADRANT OF THE EXISTING CULVERT. THE SHORING SHALL BE INSTALLED PRIOR TO THE START OF EXCAVATION AND REMOVAL OF THE EXISTING CULVERT. THE DESIGN OF THE SHORING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, BE DESIGNED AND STAMPED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, AND CONFORM TO 501.05. THE CONTRACTOR'S SHORING DESIGN AND METHOD OF INSTALLATION SHALL NOT DISTURB THE EXISTING ADJACENT PROPERTIES IN ANY WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO THE EXISTING PROPERTIES AS A RESULT OF HIS OPERATIONS. THE STATE AND/OR VILLAGE ASSUME NO RESPONSIBILITY FOR DAMAGES TO PUBLIC OR PRIVATE PROPERTY DUE TO THE WORK PERFORMED BY THE CONTRACTOR.

THE CONTRACTOR SHALL SUBMIT FIVE COPIES OF HIS SHORING DESIGN PLANS TO THE PROJECT ENGINEER AND CONCURRENTLY, ONE COPY TO THE OFFICE OF STRUCTURAL ENGINEERING, FOR REVIEW AND APPROVAL. CONSTRUCTION OF THE SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE PROJECT ENGINEER.

PORTIONS OF THE SHORING COMPOSED OF STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DIRECTION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF THE WORK.

ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS NECESSARY TO DESIGN, INSTALL AND SUBSEQUENTLY REMOVE THE SHORING SHALL BE INCLUDED FOR PAYMENT IN THE LUMP SUM PRICE BID FOR ITEM 503 — COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN.

#### ITEM 511 CLASS C CONCRETE, AS PER PLAN

IN ADDITION TO THE SPECIFICATIONS SHOWN FOR ITEM 511 IN THE CMS, THIS ITEM SHALL INCLUDE ANY AND ALL EXCAVATION AND EMBANKMENT NEEDED TO CONSTRUCT THE ENDWALLS. THE EXCAVATION AND EMBANKMENT SHALL FOLLOW THE SPECIFICATIONS OUTLINED IN THE CMS FOR ITEM 203 EXCAVATION AND EMBANKMENT.

PAYMENT WILL BE AT THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 511, CLASS C CONCRETE, AS PER PLAN. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 511 CLASS C CONCRETE, AS PER PLAN - 147 CU YD

FOUNDATION BEARING PRESSURE:

CULVERT FOOTINGS, AS DESIGNED PRODUCE A MAXIMUM BEARING PRESSURE OF 2800 LBS PER SQUARE FEET. THE ALLOWABLE MAXIMUM BEARING PRESSURE IS 3000 LBS PER SQUARE FOOT.

ITEM 511 CLASS C CONCRETE, FOOTING, AS PER PLAN

IN ADDITION TO THE SPECIFICATIONS SHOWN FOR ITEM 511 IN THE CMS, THIS ITEM SHALL INCLUDE ANY AND ALL EXCAVATION AND EMBANKMENT NEEDED TO CONSTRUCT THE FOOTINGS. THE EXCAVATION AND EMBANKMENT SHALL FOLLOW THE SPECIFICATIONS OUTLINED IN THE CMS FOR ITEM 203 EXCAVATION AND EMBANKMENT.

PAYMENT WILL BE AT THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 511, CLASS C CONCRETE, FOOTING, AS PER PLAN. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 511 CLASS C CONCRETE, FOOTING, AS PER PLAN - 114 CU YD

#### ITEM 512 TYPE 2 WATERPROOFING

TYPE 2 WATERPROOFING SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND DOWN ALL SIDES FOR THE PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL AS SHOWN ON SHEET 47. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED WITH PORTLAND CEMENT MORTAR PRIOR TO INSTALLING THE TYPE 2 WATERPROOFING. JOINT WRAP AS SPECIFIED IN 603.06 & 603.07 AND CONCRETE SEALING AS SPECIFIED IN 603.06 ARE NOT REQUIRED UNDER THE LIMITS OF THE TYPE 2 WATERPROOFING.

PAYMENT FOR THE TYPE 2
WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQ. YD.
FOR ITEM 512 — TYPE 2 WATERPROOFING.

ITEM 512 TYPE 2 WATERPROOFING - 373 SQ YD

ITEM 603 CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT (20'-0" SPAN X 4'-3" RISE), AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF SECTION 603 OF THE SPECIFICATIONS, THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY: STRAPS TO ATTACH THE CONCRETE ENDWALLS SHALL BE FURNISHED AND INSTALLED, AS SHOWN ON THE CULVERT DETAILS

THIS ITEM SHALL INCLUDE MATERIALS, EQUIPMENT AND LABOR TO CONSTRUCT THE PORTIONS OF THE MANHOLES BELOW THE TOP OF THE CULVERT, AS SHOWN ON THE PLANS

PAYMENT WILL BE AT THE CONTRACT BID PRICE PER CUBIC YARD FOR ITEM 603 CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT (20'-0" SPAN X 4'-3" RISE), AS PER PLAN. THE FOLLOWING ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED IN THE STRUCTURE GENERAL SUMMARY FOR THE WORK NOTED ABOVE.

ITEM 603 CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED FLAT TOPPED CULVERT (20'-0" X 4'-3" RISE), AS PER PLAN - 96 LF

#### DEMOLITION DEBRIS

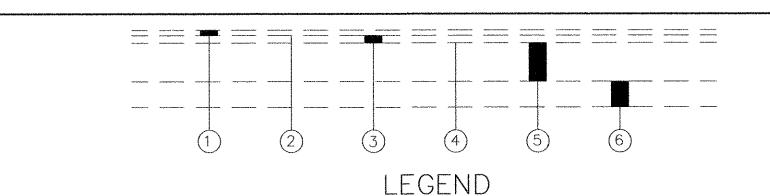
THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

#### CONDUIT FABRICATION AND APPROVAL

PRIOR TO CLOSING THE ROADWAY TO TRAFFIC, THE CONTRACTOR SHALL HAVE THE ITEM 603 TYPE A CONDUIT SPECIFIED IN THESE PLANS FABRICATED AND APPROVED. ALL COSTS ASSOCIATED WITH THESE REQUIREMENTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PERTINENT CONDUIT.

			ESTIMATED QUANTITIES
ITEM	TOTAL	UNIT	DESCRIPTION
202	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
202	289	SY	PAVEMENT REMOVED
***************************************	***************************************		
301	58	CY	ASPHALT CONCRETE BASE, PG 64-22
704	200		ACODECATE DACE
304	200	CY	AGGREGATE BASE
407	18	GAL	TACK COAT
407	9	GAL	TACK COAT TOR INTERMEDIATE COURSE
707		VAL	TACK COAT FOR INTERMEDIATE COOKSE
448	11	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG 64-22
448	8	CY	ASPHALT CONCRETE SURFACE COURSE TYPE 1, PG 64-22
503	LUMP		COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN
503	LUMP	The state of the s	UNCLASSIFIED EXCAVATION
509	13,920	LB	EPOXY COATED REINFORCING STEEL
		A MARIE A MARI	
511	6	CY	CLASS C CONCRETE, AS PER PLAN
511	114	CY	CLASS C CONCRETE, FOOTING
			TOTAL OF MATERIAL PROPERTY OF THE PROPERTY OF
512	373	SY	TYPE 2 WATERPROOFING
		A ROLL WATER TO THE TOTAL TO TH	
601	12	SY	RIPRAP USING 6" REINFORCED CONCRETE
001		J1	KIT KAT OSING O KEINTONCED CONCRETE
603	96	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE THREE SIDED
			FLAT TOPPED CULVERT, (20-0" SPAN X 4'-3" RISE) AS PER PLAN
604	2	EACH	MANHOLE NO. 3, AS PER PLAN
		The second secon	
613	216	CY	LOW STRENGTH MORTAR BACKFILL
***************************************	<u></u>	PARTICIPATION OF THE PARTICIPA	

#### QUANTITIES CARRIED TO GENERAL SUMMARY



- (1) ITEM 448 ASPHALT CONCRETE SURFACE COURSE TYPE 1, PG 64-22 1.25" TH.
- (5) ITEM 301 ASPHALT CONCRETE BASE, PG 64-22 9" TH.
- (2) ITEM 407 TACK COAT FOR SURFACE COURSE @ 0.07 G/SY

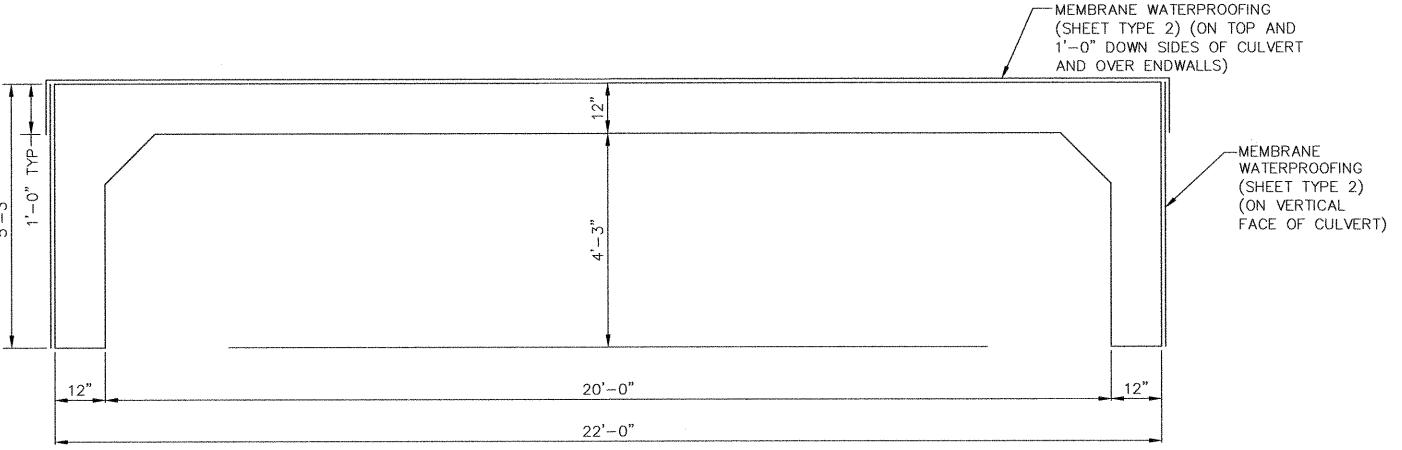
(4) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE, @ 0.04 G/SY

6) ITEM 408 - PRIME COAT @ 0.40 G/SY

ITEM 304 - AGGREGATE BASE, 6" TH.

(3) ITEM 448 - ASPHALT CONCRETE INTERMEDIATE, TYPE 1, PG 64-22 - 1.75" TH.

## TYPICAL SECTION FULL DEPTH PAVEMENT



PRECAST CONCRETE THREE SIDED FLAT TOPPED CULVERT SECTION

W

NOT TO SCA

CHECKED

FINDLAY STREET CULVERT PHASE 1 VERAL NOTES & ESTIMATED QUANTITIE

WYA-CAREY TREETSCAP

<del>47</del> 87

