GUERNSEY COUNTY	OHIO
GUE - 70 - 1937	FHWA REGION 5
IR - 70 - 7(70) 196	FEDERAL PROJECT

1/66

69 - (85)
70 - (85)
71 - (85)
72 - (85)

PARK 27
I-70 EB

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

GUE - 70 - 19.37

SAFETY REST AREA
GUERNSEY COUNTY
WILLS TOWNSHIP

IR-70-7(70) 196

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director of Transportation in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

1983 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.

The right of way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway except the effected rest area and that provisions for maintenance and safety of traffic will be set forth in these plans and estimate.

CONVENTIONAL SIGNS

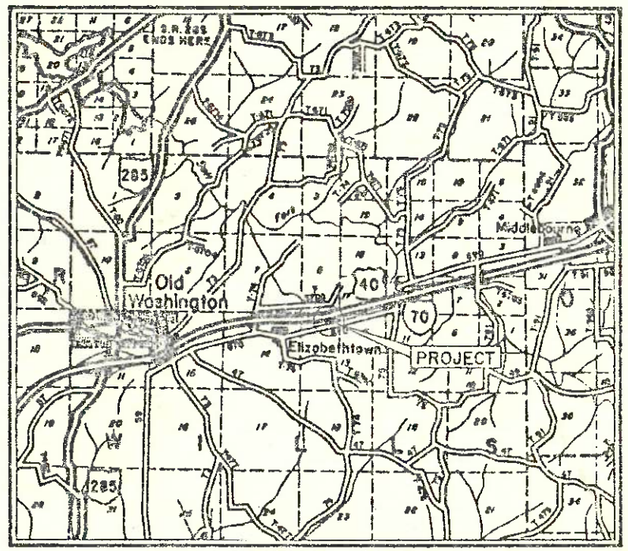
County Line
Township Line
Section Line
Corporation Line or
Fence Line (existing) (proposed)
Center Line 352 353
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light.

Limited Access (only) LA
Right of Way (only) RW
Limited Access & Right of Way LA & RW
Existing Right of Way
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)

INDEX OF SHEETS

LINE DATA

NET LENGTH OF PROJECT = 0.00
BEGIN WORK STA. 169+25
END WORK STA. 206+65
TOTAL NET LENGTH OF WORK = 3740 L.F OR 0.708 MI.



LOCATION MAP

SCALE IN MILES 0 1 2 3 4

Portion to be improved
State & Federal Routes
Other Roads

SCALES

Plan-Layout & Landscape 0 10 20
Site 0 50 100
Plan-Demolition & Utilities 0 20 40
Grading 0 30 60
Water Line 0 100 200

SUPPLEMENTAL SPECIFICATIONS		
SPECIAL: STANDARD SPECIFICATIONS FOR MOTORIST SERVICES BUILDING AND STORAGE UNIT. PART I 5-16-84		
SPECIAL: STANDARD SPECIFICATIONS FOR COMPLETE WASTE TREATMENT SYSTEM. PART II 5-16-84		
814 1-1-69	803 5-27-83	832 11-25-70
824 10-8-82	939 6-26-82	

Approved John A. Hagan
Date 5-21-84 District Deputy Director of Transportation

Approved R. L. Goodman
Date 8-13-84 Engineer of Design Services

Approved Wayne H. Kauble
Date 10-24-84 Chief Engineer, Planning and Design

Approved Warren J. Smith
Date 10-24-84 Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

			MH-1	6-12-75	LA-15	8-1-84	
BP-6	6-1-65		MH-3	6-12-75	LA-16	12-22-82	
BP-7	12-6-76				HL-1	9-6-73	
		HW-48 4-1-80			HL-3	7-27-73	TC-41.10 12-23-81
BP-12	7-7-81						TC-42.10 8-19-77
					HL-8	1-21-76	TC-51.10 3-30-79
MC-2	7-7-81		LA-1	6-1-79	HL-9	3-22-77	TC-51.11 4-3-79
			LA-2	6-1-79	HL-10	6-1-79	
MC-4	7-26-76	CB-2-2A & B 6-1-79			HL-11	6-1-79	
			LA-10	6-1-79			
F-1	11-10-83		LA-13	2-2-81	HL-15	1-21-76	
					HL-16	4-6-73	
			LA-14	12-22-82			

STATE OF OHIO — REGISTERED PROFESSIONAL ENGINEER

R. Pierce 32044 4-30-84
REGISTERED ENGINEER NO. DATE

PLANS PREPARED BY
COLUMBUS ENGINEERING CONSULTANTS LIMITED
CONSULTING CIVIL ENGINEERS
2457 NORTH STAR RD.
COLUMBUS, OHIO
FOR
THE STATE OF OHIO

: GUE-70-19.37
Letting 19 , Contract No.

FHWA REGION	STATE	PROJECT	
5	OHIO		

2/66

GUERNSEY COUNTY
GUE-70-19.37

GENERAL NOTES

1. BENCH MARK & BASE LINE

A BENCH MARK AND SURVEY BASE LINE HAVE BEEN ESTABLISHED O.D.O.T. PERSONNEL HAVE ESTABLISHED THIS ELEVATION DATUM.

2. FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 400 SQUARE FEET OF FLOOR SPACE.

PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

3. CLOSURE OF REST AREAS TO THE PUBLIC

THE REST AREAS WILL BE CLOSED TO THE TRAVELING PUBLIC FOR THE TOTAL TIME PERIOD OF CONSTRUCTION.

4. STORAGE OF MATERIAL & EQUIPMENT

ALL MATERIALS, EQUIPMENT AND VEHICLES SHALL BE STORED WITHIN THE CONFINES OF THE PARKING LOTS, AT THE DIRECTION OF THE ENGINEER.

5. UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

6. UTILITIES NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER, THE REGISTERED UTILITY PROTECTION SERVICE AND THE OWNERS OF EACH UNDERGROUND UTILITY FACILITY SHOWN IN THE PLANS.

THE OWNER OF THE UNDERGROUND UTILITY FACILITY SHALL, WITHIN FOURTY-EIGHT HOURS, EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, AFTER NOTICE IS RECEIVED, STAKE, MARK OR OTHERWISE DESIGNATE THE LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING OR LOCATING SHALL BE CO-ORDINATED TO STAY APPROXIMATELY TWO DAYS AHEAD OF THE PLANNED CONSTRUCTION.

THE FOLLOWING UTILITIES WILL BE AFFECTED BY THIS PROJECT:

ELECTRIC
GUERNSEY-MUSKINGUM ELECTRICAL CO-OP
ATTENTION: CURT JONES
17 SOUTH LIBERTY STREET
NEW CONCORD, OHIO 43762
(614) 826-7661

TELEPHONE
ALLTEL OHIO
ATTENTION: ROD ELLIS
66 NORTH FOURTH STREET
NEWARK, OHIO 43055
(614) 349-8574

WATER
GUERNSEY COUNTY SANITARY SEWER
DISTRICT NO. 100
ATTENTION: ED ALLGAIR
COURT HOUSE ANNEX
CAMBRIDGE, OHIO 43725
(614) 439-1269

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 5
1200 WEST CHURCH STREET
NEWARK, OHIO 43055
(614) 344-1116
ATTENTION: PAUL BARAN, P.E.

7. TRAFFIC MAINTENANCE

THE GENERAL CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS (SIGNS, BARRIERS, ETC.) FOR CONTROL OF TRAFFIC DURING CONSTRUCTION AS SHOWN ON SHEETS NO. 7 AND 8.

THE CONTRACTOR SHALL FURNISH, PLACE AND SUBSEQUENTLY REMOVE THE BARRIER AS WELL AS FURNISH, ERECT AND SUBSEQUENTLY REMOVE ALL SIGNS AND OTHER TRAFFIC CONTROL DEVICES NECESSARY TO CLOSE THE REST AREA. ANY TEMPORARY REARRANGEMENT OR ALTERATION OF THE TRAFFIC CONTROL DEVICES THAT MAY BECOME NECESSARY FOR THE CONTRACTOR TO FACILITATE OPERATIONS SHALL BE DONE BY THE CONTRACTOR, HOWEVER NO TRAFFIC CONTROL DEVICES SHALL BE REARRANGED OR ALTERED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER. AT THE CONCLUSION OF THE TEMPORARY OPERATION, THE CONTRACTOR SHALL REPLACE THE TRAFFIC CONTROL DEVICES TO THEIR ORIGINAL POSITION AND CONDITION.

8. TREE PROTECTION

NO WORK WILL BE PERMITTED WHERE TREES, SHRUBS, OR UTILITIES ARE PRESENT WITHIN THE WORK LIMITS OF THE REST AREA PROJECT PRIOR TO STAKING BY THE GENERAL CONTRACTOR OF THE LIMITS OF ALL REST AREA BUILDINGS, SEWER LINES, SERVICE DRIVES, SIDEWALKS, GRADING WORK AND EXISTING AND PROPOSED UTILITY LINES.

THE METHOD FOR MARKING TREES AND SHRUBS TO BE SALVAGED, PROTECTED OR REMOVED WILL BE ESTABLISHED BY THE ENGINEER, DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST AND THE GENERAL CONTRACTOR PRIOR TO WORK AROUND ANY EXISTING TREES, SHRUBS AND UTILITY LINES.

TREE AND ROOT PROTECTION USING SNOW FENCE SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AS INDICATED ON THE PLAN AND AS DIRECTED BY THE ENGINEER. TREE ROOT AREAS EQUAL TO THE BRANCH SPREAD SHALL BE PROTECTED AS PER STANDARD DRAWING LA-1.

ONLY PNEUMATIC TIRED EQUIPMENT SHALL BE USED WITHIN THE REST AREA OUTSIDE THE PARKING LOTS UNLESS SPECIFICALLY PERMITTED BY THE PROJECT ENGINEER. CARE SHALL BE TAKEN BY THE VARIOUS CONTRACTORS NOT TO OPERATE EQUIPMENT OR OTHER VEHICLES WHEN THE GROUND IS WET OR SOFT IN ORDER TO AVOID DEEP RUTTING, SOIL COMPACTION AND OTHER DESTRUCTION OF TREE ROOT SYSTEMS.

TREES TO BE SALVAGED THAT ARE DAMAGED AT ANY TIME DURING THE CONTRACT SHALL BE REPAIRED OR REPLACED (AT THE CONTRACTOR'S EXPENSE) AS DETERMINED BY THE ENGINEER AFTER CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST. DAMAGED TREES THAT CAN BE REPAIRED SHALL BE PRUNED AND THE DAMAGE REPAIRED WITH PAINT OR WOUND DRESSING AS PER 663.14. REPLACEMENT SHALL BE, IN QUANTITY AND QUALITY, SUFFICIENT TO COMPENSATE FOR SIZES OF TREES LOST. THE WORK SHALL BE COMPLETED AS PER 665 WITH TREES OF THE SIZE AND VARIETY, AS DIRECTED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST.

9. ITEM SPECIAL--SNOW FENCE--TREE PROTECTION

SNOW FENCE SHALL CONSIST OF WOOD PICKETS 1/2" x 1-1/2" x 4'-0" NOMINAL SIZE, PAINTED RED AND WOVEN WITH FIVE (5) DOUBLE STRANDS OF 12 GAUGE STEEL WIRE, SPACED APPROXIMATELY 2" APART. THE FENCE SHALL BE SUPPORTED BY STEEL OR WOOD POSTS OF ADEQUATE SIZE AND SPACING. USED FENCE AND POSTS IN GOOD CONDITION MAY BE USED AS APPROVED BY THE ENGINEER.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER LINEAR FOOT OF SNOW FENCE FURNISHED, ERECTED AND SUBSEQUENTLY REMOVED.

10. ITEM 201--CLEARING & GRUBBING AS PER PLAN

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION IS INDICATED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

SIZES:	1"-12"	13"-24"	25"-36"
No. TREES	5	0	0

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.*

*Note: Also included in Item 201 is the relocation of the Blue Star Memorial Monument as described on Sheet No. 12.

11. SODDING, AS PER PLAN

ALL NEW CONCRETE WALKS AND DRIVES WITHIN THE REST AREA SHALL HAVE A BORDER OF SOD ON EACH SIDE. ADDITIONAL AREAS OF SODDING WILL BE SHOWN AS PER PLAN.* SOD SHALL BE LAID IN ACCORDANCE WITH ITEM 660 EXCEPT THAT IT SHALL BE KENTUCKY BLUEGRASS, WEED FREE, AND BE COMMERCIALLY CULTIVATED (NURSERY GROWN). * or as directed by the Engineer.

12. SEEDING AND MULCHING

SEEDING AND MULCHING OF ALL CONSTRUCTION SITES AND OTHER DISTURBED AREAS WITHIN THE CONFINES OF THE REST AREA (EXCLUSIVE OF THE SODDED AREAS) SHALL CONFORM TO 659.09.

SEED MIXTURE SHALL CONFORM TO THAT SPECIFIED FOR USE IMMEDIATELY IN FRONT OF RESIDENCES.

13. RENOVATION OF EXISTING GRASS AREAS

AREAS WHICH ARE DAMAGED DUE TO STORAGE OR CONSTRUCTION OPERATIONS UNDER THIS CONTRACT ARE TO BE FILLED IN AND UNIFORMLY COVERED WITH ONE (1) INCH OF TOPSOIL (653.02).

FERTILIZER (12-12-12), 659.03, SHALL BE APPLIED AT THE RATE OF 15 POUNDS PER 1,000 SQUARE FEET AND WORKED INTO THE SOIL TO A DEPTH OF THREE (3) INCHES.

SEED SHALL BE THE URBAN MIXTURE AS SPECIFIED IN 659.09. MULCH SHALL BE AS SPECIFIED IN 659.06.

THE EXTENT OF AREAS TO BE RENOVATED SHALL BE AS DETERMINED BY THE ENGINEER. ALL AREAS TO BE RENOVATED, PLUS THE IMMEDIATE ADJACENT AREA, SHALL BE MOWED TO A HEIGHT OF TWO (2) INCHES BEFORE ACTUAL OPERATION OF SEEDING AND RENOVATING EXISTING SOIL IN ACCORDANCE WITH ITEM 655. ALL AREAS TO BE RENOVATED SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE STATE.

14. ITEM 608, 4" CONCRETE WALK, AS PER PLAN

ITEM 304, AGGREGATE BASE (SEE SHEET NO. 9) SHALL BE PLACED UNDER ALL AREAS OF FOUR (4) INCH CONCRETE WALKS, AS PER PLAN. THE AGGREGATE WILL BE INCLUDED IN THE BID FOR ITEM 608, 4" CONCRETE WALK, AS PER PLAN.

EXCAVATION FOR AGGREGATE BASE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 203, EXCAVATION, NOT INCLUDING EMBANKMENT CONSTRUCTION.

EMBANKMENT FOR WALK AREAS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 203, EMBANKMENT.

15. ITEM 452, SERVICE DRIVES, AS PER PLAN

SUBGRADE UNDER SERVICE DRIVES AND CURB RAMPS SHALL BE COMPACTED TO A DEPTH OF SIX (6) INCHES AS DESCRIBED IN 203.13. JOINTS SHALL BE PLACED AT MAXIMUM 10 FOOT INTERVALS AND CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING BP-6. THE COST OF JOINTS, GRADING, EXCAVATION AND COMPACTION SHALL BE INCLUDED IN ITEM 452, 7" PLAIN PORTLAND CEMENT PAVEMENT, AS PER PLAN.

16. ITEM SPECIAL, PLASTIC CAUTION TAPE

PLASTIC CAUTION TAPE, AS DESCRIBED IN THE STANDARD SPECIFICATIONS FOR THE MOTORIST SERVICES BUILDING AND STORAGE UNIT, SHALL BE INSTALLED ABOVE THE PRIMARY ELECTRICAL CABLE UP TO THE TRANSFORMER PAD. VERTICAL TAPE LOCATION IS DETAILED ON SHEET. NO. 9.

17. ITEM SPECIAL, CONCRETE SLABS

DETAIL PLACEMENT OF PICNIC TABLES, PICNIC TABLE SLABS, SHELTER HOUSE, GRILLS, GRILL SLABS, WASTE RECEPTACLE SLEEVES, AND WASTE RECEPTABLE SLABS SHALL BE AS DIRECTED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT LANDSCAPE ARCHITECT OR HORTICULTURIST. COST FOR EACH ITEM AND SLAB SHALL BE INCLUDED IN EACH ITEM SPECIAL AS DESCRIBED AND DETAILED ON THE FOLLOWING SHEETS: STD. DWGS. LA-10, LA-13, AND LA-14, LA-15 & LA-16.

18. EXISTING WELL SHELTERS

THE EXISTING WELL SHELTER SHALL REMAIN UNDISTURBED AND SHALL BE INCORPORATED INTO THE DESIGN OF THE NEW REST AREA FACILITIES. THE WATER PUMP WITHIN THIS SHELTER SHALL REMAIN UNDISTURBED AND OPERABLE TO THE PUBLIC.

19. REMOVAL OF STRUCTURES, FOUNDATIONS & SLABS

THIS WORK SHALL CONSIST OF THE REMOVAL OF EXISTING STRUCTURES (BUILDINGS), APPURTENANCES, FOUNDATIONS AND CONCRETE SLABS IN CONFORMANCE WITH THE PROVISIONS OF SECTION 202.

THE GENERAL CONTRACTOR SHALL REMOVE: ONE (1) TOILET BUILDING, ONE (1) BULLETIN BOARD WITH SLAB, ONE (1) MOTORIST INFORMATION SHELTER WITH SLAB, FIVE (5) PICNIC TABLE SLABS, ONE (1) GRILL SLAB, AND ONE (1) PICNIC SHELTER.

20. REMOVAL OF PRIVY VAULT, AS PER PLAN

THIS WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PRIVY VAULT IN CONFORMANCE WITH THE PROVISIONS OF SECTION 202.

THE GENERAL CONTRACTOR SHALL REMOVE AND BACKFILL ONE (1) PRIVY VAULT. THE FOUNDATION AND VAULT WALLS SHALL BE REMOVED TO A DEPTH OF TWO (2) FEET BELOW THE EXISTING GROUND LEVEL. THE VAULT WALLS AND BOTTOM SHALL BE CRACKED TO PERMIT DRAINAGE.

THE GENERAL CONTRACTOR SHALL GIVE THE O.D.O.T. DISTRICT 5 OPERATIONS OFFICE A MINIMUM OF THREE (3) WEEKS NOTICE BEFORE DEMOLITION OF THE TOILET BUILDINGS IN ORDER FOR THE DISTRICT TO HAVE THE VAULTS PUMPED OUT PRIOR TO DEMOLITION.

21. ITEM SPECIAL, WOOD BENCH

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING WOOD BENCHES AS SHOWN ON THE PLANS.

BENCHES SHALL BE MADE OF CLEAR HEARTWOOD REDWOOD, APPROXIMATELY 72" LONG BY 18" WIDE SEAT PLANKS SET ON EDGE, SURFACE MOUNTED WITH GALVANIZED VANDAL-PROOF FASTENERS AS PER MANUFACTURER'S RECOMMENDATIONS AND APPROVAL OF THE ENGINEER.

BENCHES SHALL BE AS MANUFACTURED BY THE FOLLOWING COMPANIES OR APPROVED EQUAL:
"MACOTTA" MB 7220
"VAUGHAN & ASSOC." F17003R
"TIMBERFORM" 2160-6

THE COST OF ALL OF THE ABOVE SHALL BE INCLUDED IN THE PRICE BID FOR EACH ITEM SPECIAL, WOOD BENCH.

22. CONDUIT JACKED UNDER PAVEMENT, AS PER PLAN

THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT OF THE SIZE(S) INDICATED UNDER EXISTING PAVEMENT AND SHOULDERS BY "DRILLING" OR "JACKING". CONDUIT SHALL BE PLACED WITH THE LEAST AMOUNT OF DISTURBANCE TO EXISTING FEATURES. ALL NECESSARY EXCAVATIONS SHALL BE BACKFILLED ACCORDING TO 625.01.

THE CONTRACTOR MAY USE OPEN CUT CONSTRUCTION IN LIEU OF THE ABOVE AT NO ADDITIONAL COST TO THE STATE. CONSTRUCTION METHODS AND PAY LENGTH ARE DETAILED ON STANDARD DRAWING HL-11.

THE COST OF EXCAVATION, DRILLING, JACKING OR TRENCHING, BACKFILLING, COMPACTION, PAVEMENT RESTORATION AND ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS, SHALL BE INCLUDED IN ITEM 625, CONDUIT JACKED UNDER PAVEMENT, AS PER PLAN.

23. ITEM SPECIAL, SHELTER HOUSE

THE SHELTER HOUSE SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWINGS LA-15 AND LA-16, COMPLETE AND IN PLACE, AS LOCATED ON SHEET 12.

THE COST OF ALL MATERIALS, LABOR AND INCIDENTALS REQUIRED TO CONSTRUCT THE SHELTER HOUSE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "ITEM SPECIAL, SHELTER HOUSE".

24. CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

Rev. 12-13-84

FHWA REGION	STATE	PROJECT	
5	OHIO		

3 CC

GUERNSEY COUNTY
GUE-70-19.37

GENERAL NOTES

25. PLANTING HOLE AND BED PREPARATION

AFTER THE LAYOUT IS APPROVED BY THE ENGINEER, SHRUB AND GROUNDCOVER BEDS SHALL BE CULTIVATED TO A MINIMUM DEPTH OF SIX (6) INCHES BY A PLOW, HARROW OR DISC, OR OTHER METHOD APPROVED BY THE ENGINEER. THE CULTIVATION SHALL TAKE PLACE AS FAR IN ADVANCE OF THE PLANTING OPERATION AS POSSIBLE. WHERE SHRUBS ARE SHOWN, INDIVIDUAL HOLES SHALL BE DUG ON CENTERS AS SHOWN ON THE PLANS. THESE HOLES SHALL ALLOW FOR A MINIMUM OF NINE (9) INCHES OF BACKFILL MIXTURE AROUND THE SIDES OF THE BALLS. THE BOTTOM OF THE HOLE SHALL BE NO DEEPER THAN THE BALL TO BE PLANTED. THE MATERIAL REMOVED FROM THE HOLES SHALL BE TAKEN FROM THE PROJECT IF IT IS FOUND TO BE UNACCEPTABLE FOR USE AS BACKFILL AS DETERMINED BY THE ENGINEER. THE PLANT SHALL THEN BE SET AND THE HOLE FILLED WITH BACKFILL MIXTURE, AND THE PLANTING OPERATION PERFORMED AS SPECIFIED IN ITEMS 662.17 AND 662.18. ALL EXCESS DIRT SHALL BE REMOVED FROM THE SITE.

EXISTING TREES AND SHRUBS SHALL TAKE PRIORITY OVER PROPOSED PLANTINGS. THE LOCATIONS OF THE PROPOSED TREES AND SHRUBS ARE APPROXIMATE AND MAY BE REARRANGED AT THE DIRECTION OF THE ENGINEER WHEN OBSTRUCTIONS ARE ENCOUNTERED.

IF AN AUGER IS USED IN DIGGING POCKET HOLES AND POLISHED (SHINY) SIDES OCCUR IN CLAY OR HEAVY SOILS, THE USE OF SUCH AN AUGER SHALL BE DISCONTINUED AND THE HOLES SHALL BE DUG WITH A BACKHOE OR ANOTHER APPROVED METHOD.

BACKFILL NO. 1 - THE BACKFILL MIXTURE USED TO FILL POCKET HOLES IN LIGHT AND MEDIUM SOILS (SAND & AVERAGE) SHALL CONSIST BY VOLUME OF 2 PARTS SOIL CONDITIONER, 2 PARTS COMPRESSED SPHAGNUM PEAT OR 3 PARTS SEDGE PEAT, AND 2 PARTS APPROVED TOPSOIL.

BACKFILL NO. 2 - THE BACKFILL MIXTURE USED TO FILL POCKET HOLES IN HEAVY SOILS (CLAY & SHALE) SHALL CONSIST BY VOLUME OF 1 PART SOIL CONDITIONER, 1 PART COMPRESSED SPHAGNUM PEAT OR 2 PARTS SEDGE PEAT, AND 2 PARTS APPROVED TOPSOIL.

INCORPORATE THOROUGHLY INTO THE BACKFILL MIXTURES 5 LBS. OF COMMERCIAL FERTILIZER (0-20-20) PER CUBIC YARD. THE ENGINEER, AFTER CONSULTATION WITH THE LANDSCAPE ARCHITECT, SHALL DETERMINE THE LOCATIONS WHERE THE BACKFILL MIXTURES SHALL BE USED.

26. SCHEDULING

ALL DIGGING AND PLANTING OF DECIDUOUS PLANTS SHALL BE DONE AFTER OCTOBER 1, AND BEFORE JUNE 1. EVERGREENS SHALL BE DUG AND PLANTED AFTER MARCH 15, AND BEFORE JUNE 1.

27. FERTILIZER

FOUR OUNCE (8 YEAR) COMMERCIAL FERTILIZER PACKETS USED IN PLANTING OPERATION SHALL BE DELIVERED DRY IN ORIGINAL, UNOPENED CONTAINERS. FERTILIZER ANALYSIS SHALL BE 16% NITROGEN, 8% PHOSPHORIC ACID AND 16% POTASH. FERTILIZER SHALL BE OF A SLOW RELEASE TYPE IN A POLYETHYLENE PERFORATED PACKET WITH MICROPORE HOLES.

THE PACKETS SHALL BE PLACED 6 TO 8 INCHES DEEP AND EVENLY SPACED AROUND THE PERIMETER OF THE PLANTING HOLE, ADJACENT TO THE BALL OR ROOT MASS BUT NOT IN DIRECT CONTACT WITH THE ROOTS. THE PACKETS SHALL NOT BE CUT, RIPPED OR DAMAGED.

EACH SHRUB OR TREE SHALL BE FERTILIZED ACCORDING TO THE FOLLOWING SCHEDULE:

VINES 1'-2'	1 PACKET
SHRUBS 1'-2'	2 PACKETS
SHRUBS 2'-3'	2 PACKETS
SHRUBS 3'-4'	3 PACKETS
TREES 5'-6'	3 PACKETS
TREES 6'-8'	4 PACKETS
TREES 1-1/2"-2" CAL.	2 PACKETS
TREES 2"-2-1/2" CAL.	3 PACKETS
TREES 2-1/2"-3" CAL.	4 PACKETS
TREES 3"-3-1/2" CAL.	5 PACKETS

IF IT BECOMES NECESSARY TO REMOVE AND REPLACE MISSING, DEAD OR UNHEALTHY PLANTS, ALL OLD PACKETS SHALL BE REPLACED WITH NEW PACKETS.

THE FOUR OUNCE 16-8-16 FERTILIZER PACKETS SHALL BE DESIGNATED BY THE MANUFACTURER TO BE EFFECTIVE FOR EIGHT YEARS. PACKETS SUCH AS "EEESY GROW", "THE UNIQUE FEEDER" OR AN APPROVED EQUAL SHALL BE USED.

28. ITEM 661.21 WATERING

WATER SHALL BE FURNISHED BY THE CONTRACTOR AND ALL PLANT MATERIAL SHALL BE WATERED THOROUGHLY AT THE TIME OF PLANTING REGARDLESS OF AMPLE MOISTURE CONTENT OF THE SURROUNDING SOIL. SUSPENSION OF WATERING OPERATIONS BECAUSE OF RAINFALL WILL BE DETERMINED BY THE ENGINEER IN CONSULTATION WITH THE LANDSCAPE ARCHITECT. AN AVERAGE OF ONE INCH OF RAINFALL PER WEEK SHALL BE CONSIDERED ADEQUATE. DETERMINATION OF RAINFALL SHALL BE BASED UPON THE USE OF A RAIN GAUGE APPROVED BY THE PROJECT ENGINEER AND FURNISHED BY THE CONTRACTOR.

29. MULCH

MULCH SHALL BE AS PER ITEM 661.04 WITH THE FOLLOWING EXCEPTIONS: WOOD SHAVINGS OR PEAT MOSS OR CORN COBS SHALL NOT BE USED AS A TOP MULCH. WOOD CHIPS SHALL BE AGED (STOCKPILED) AT LEAST 6 MONTHS PRIOR TO PLACEMENT AROUND PLANTS. MULCH SHALL BE SIX INCHES LOOSE MEASUREMENT. AFTER MULCHING, COMMERCIAL FERTILIZER (12-12-12) SHALL BE APPLIED AS SPECIFIED IN ITEM 662.18.

30. PRUNING

ALL PLANTS SHALL BE PRUNED WITHIN SEVEN DAYS AFTER PLANTING. THE PRUNING SHALL BE DONE ACCORDING TO SELECTED TYPICAL PLANTS OF EACH SPECIES PRUNED AND USED AS A SAMPLE AS DIRECTED BY THE ENGINEER.

ANY CANDLE GROWTH ON NEEDLE EVERGREENS WHICH EXCEED 3 INCHES AT PLANTING TIME SHALL BE CUT BACK TO THAT LENGTH IMMEDIATELY.

31. ITEMS 662 & 663

ALL TREES AND SHRUBS SHALL BE SPECIMEN (NO.1 GRADE) PLANTS WITH GROWTH AND BRANCHING HABIT TYPICAL OF THE SPECIES SPECIFIED. NO PARK GRADE (NO. 2 OR 3 GRADE) PLANTS WILL BE ACCEPTED.

32. STAKING MATERIALS

ALL TREES SHALL BE STAKED AS SHOWN IN THE STANDARD DRAWING LA-2. STAKING OF SMALL ORNAMENTAL TREES SHALL BE SIMILAR TO THAT OF EVERGREENS. ALL DECIDUOUS TREE TRUNKS ARE TO BE TREATED WITH LINDANE SPRAY BEFORE WRAPPING.

33. PLANTING PERIOD OF ESTABLISHMENT

BEFORE FINAL INSPECTION, ALL PLANTINGS SHALL BE IN PLACE AND UNDER THE CARE OF THE CONTRACTOR FOR A PERIOD OF ESTABLISHMENT. THIS PERIOD SHALL BEGIN IMMEDIATELY UPON COMPLETION OF THE PLANTING OPERATION FOR ANY PLANT OR SPECIES GROUP AND CONTINUE UNTIL OCTOBER 1. IN NO CASE SHALL IT BE LESS THAN ONE GROWING SEASON, JUNE 1 TO OCTOBER 1.

DURING THIS PERIOD OF ESTABLISHMENT, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW SUCH HORTICULTURAL PRACTICES AS REQUIRED TO ASSURE THE VIGOR AND GROWTH OF THE TRANSPLANTED MATERIAL. THIS CARE SHALL INCLUDE WATERING, REMULCHING, RESTAKING, GUYING AND CULTIVATING. THERE SHALL BE A MINIMUM OF TWO WEEDING AND MOWING (BED EDGES, AROUND TREES AND GUY STAKES) PROGRAMS OF SUCH INTENSITY AS TO COMPLETELY RID THE PLANTED AND MULCHED AREAS OF WEEDS AND GRASSES. THE FIRST PROGRAM SHALL BEGIN ON OR ABOUT JUNE 15 AND THE OTHER APPROXIMATELY 8 WEEKS LATER.

EACH PLANT SHALL HAVE SUFFICIENT WATER TO KEEP IT IN A HEALTHY, GROWING CONDITION. IF LOCAL WEATHER CONDITIONS WARRANT, THE ENGINEER MAY REQUIRE WEEKLY WATERING. WHEN WATERING IS REQUIRED, A SCHEDULE FOR WATERING EACH PLANT SHALL BE SUPPLIED TO AND APPROVED BY THE ENGINEER. THE WATER SHALL BE APPLIED IN SUCH A MANNER AS TO SATURATE THE ROOT AND MULCHED AREA OF EACH PLANT WITHOUT CAUSING RUNOFF (SEE WATERING TABLE). IN CASE OF FALL PLANTINGS, THESE WATERINGS SHALL CONTINUE UNTIL SOIL FREEZE-UP AND RECOMMENCE AFTER THE SPRING THAW UNLESS OTHERWISE DIRECTED.

ON OR ABOUT SEPTEMBER 15, THE ENGINEER SHALL INSPECT THE PLANTING AND SUPPLY THE CONTRACTOR WITH A LISTING OF THOSE PLANTS HAVING DIED, DIED BACK BEYOND NORMAL PRUNING LINES OR ARE MISSING FROM THE PLANTING. THE CONTRACTOR SHALL MAKE THE REPLANTING AS REQUIRED AND IN ACCORDANCE WITH THE SPECIFICATIONS FOR THE ORIGINAL MATERIAL. THESE REPLACEMENTS ARE NOT SUBJECT TO THE PERIOD OF ESTABLISHMENT, HOWEVER, PLANTS PLANTED INITIALLY IN THE FALL WHICH HAVE DIED BEFORE THE SPRING PLANTING SEASON SHALL BE REPLACED IMMEDIATELY AND ARE SUBJECT TO THE ESTABLISHMENT PERIOD.

AFTER REPLACEMENTS HAVE BEEN PLANTED, THE FINAL INSPECTION SHALL BE MADE AND THE ACTUAL COUNT OF LIVE PLANTS OF EACH VARIETY AND SPECIES LISTED FOR PAYMENT.

WATERING TABLE

VINES 1'-2' SIZE	2 GALLONS PER PLANT
SHRUBS 1'-2' SIZE	2 GALLONS PER PLANT
SHRUBS 2'-3' SIZE	4 GALLONS PER PLANT
SHRUBS 4'-5' SIZE	7 GALLONS PER PLANT
TREES 5'-6' SIZE	10 GALLONS PER PLANT
TREES 1-1/4" - 1-1/2" CAL.	15 GALLONS PER PLANT
TREES 1-1/2" - 2" CAL.	20 GALLONS PER PLANT
TREES 2" - 3" CAL.	25 GALLONS PER PLANT
TREES 3" - 4" CAL.	30 GALLONS PER PLANT

THE METHOD OF MEASUREMENT FOR SUMMER WATERING SHALL BE BY APPROVED WATERING FROM TANKS OR BY INDIVIDUALLY MEASURED CONTAINERS TO EACH PLANT TO BE WATERED. PAYMENT FOR PLANTING PERIOD OF ESTABLISHMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS 661, 662 AND 663.

34. SOIL CONDITIONER

A SOIL CONDITIONER SUCH AS "TURFACE," "LUSOIL," "TERRAGREEN," OR AN APPROVED EQUAL SHALL BE USED. THE PARTICLE SIZE GRADATION OF THE SOIL CONDITIONER SHALL BE AT LEAST 80% PASSING A NO. 6 SIEVE AND NOT MORE THAN 5% PASSING A NO. 50 SIEVE. ALTERNATE SHALL BE HORTICULTURAL PERLITE.

35. HERBICIDES

AFTER PLANTING AND FERTILIZING HAVE BEEN COMPLETED AND APPROVED, THE AREA OF THE BED SHALL BE TREATED WITH SIMAZINE, DYMID OR AN APPROVED EQUAL HERBICIDE. RATE AND METHOD OF APPLICATION SHALL BE IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS AND UNDER THE DIRECT SUPERVISION OF A PESTICIDE APPLICATOR LICENSED BY THE STATE OF OHIO.

36. TOPSOIL TESTING

TOPSOIL FAILING CURRENT TEST STANDARDS MAY BE ALTERED, UPON APPROVAL OF THE ENGINEER, BY ADDING APPROVED CONDITIONERS TO CORRECT THE DEFICIENCIES. TOPSOIL SHALL BE FREE OF JOHNSON GRASS AND CONFORM TO ITEM 653 AS DETERMINED BY THE ENGINEER.

37. PERENNIALS

ALL PERENNIALS SHALL BE NURSERY GROWN FOR A MINIMUM PERIOD OF TWO YEARS, WELL DEVELOPED, HEALTHY, FREE FROM INSECTS AND DISEASES, AND POSSESS A NORMAL UNBROKEN ROOT SYSTEM.

PERENNIALS SHALL BE PLACED TWELVE (12) INCHES APART ON CENTER IN A MANNER THAT CONFORMS AS MUCH AS POSSIBLE TO THE PLANS. WHERE POSSIBLE ALL VOIDS BETWEEN THE BOULDERS SHALL BE PLANTED WITH PERENNIALS AS DETERMINED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT HORTICULTURIST.

COST OF ALL OF THE ABOVE (SEE SHEET NO. 14 FOR LIST OF PERENNIALS) SHALL BE INCLUDED IN THE PRICE BID FOR EACH ITEM 661, PERENNIAL.

38. BOULDERS, ITEM SPECIAL

BOULDERS SHALL BE SUPPLIED AND DELIVERED TO THE PROJECT SITE BY THE GENERAL CONTRACTOR. THE BOULDERS SUPPLIED SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS.

A. BOULDERS SHALL WEIGH A MINIMUM OF 700 POUNDS EACH.
B. BOULDERS SHALL BE IN THEIR "NATURAL" FORM (NO CUT STONE OR QUARRIED STONE SHALL BE PERMITTED).
C. GRANITE BOULDERS SHALL BE SELECTED WHERE POSSIBLE, BUT OTHER BOULDERS OF SIMILAR COMPOSITION ARE ALLOWABLE IF APPROVED BY THE ENGINEER IN CONSULTATION WITH THE DISTRICT HORTICULTURIST. NOTE: NO BOULDERS COMPOSED OF SHALE, LOOSELY COMPACTED SANDSTONE OR OTHER HIGHLY ERODIBLE FORMATIONS SHALL BE PERMITTED.

PLACEMENT OF BOULDERS WITHIN THE PLANTING BEDS (SEE SH. 14) SHALL CONFORM TO THE PLANS AS CLOSELY AS POSSIBLE. BOULDERS SHALL BE BURIED TO A DEPTH OF APPROXIMATELY ONE-THIRD (1/3) OF TOTAL HEIGHT BELOW THE FINAL SOIL GRADE. NO BOULDERS SHALL BE OVER 3 FEET IN HEIGHT ABOVE FINISH GRADE.

COST OF ALL OF THE ABOVE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SPECIAL, BOULDERS.

39. ITEM SPECIAL, REMOVE EXISTING LIGHT POLE

THE CONTRACTOR SHALL REMOVE THE TRANSFORMER BASE, LIGHT POLE, BRACKET ARM, LUMINAIRE AND WIRING. HE MAY REUSE THE BETTER OF THE ASSEMBLIES REMOVED. THE REMAINING ASSEMBLIED SHALL BE STORED ON THE SITE FOR PICKUP BY STATE FORCES.

40. ITEM SPECIAL, REMOVE EXISTING LIGHT POLE FOUNDATION

THE EXISTING FOUNDATION SHALL BE REMOVED ONE FOOT BELOW GRADE AND THE AREA RESTORED TO MATCH EXISTING CONDITIONS.

41. ITEM SPECIAL, RECONNECT EXISTING LIGHT POLE

THE CONTRACTOR SHALL EXTEND THE EXISTING FOUNDATION CONDUIT FROM THE POLE FOUNDATION TO PULLBOX, REMOVE DUCT FROM CIRCUIT CABLE INSIDE PULLBOX, RUN CIRCUIT CABLE THRU CONDUIT FROM PULLBOX TO POLE BASE AND CONNECT TO NEW POLE & BRACKET CABLE WITH NEW CONNECTOR KITS. GROUND WIRE FROM POLE TO GROUND ROD SHALL BE INSTALLED AND NEW GROUND ROD DRIVEN IN PULLBOX. CIRCUIT GROUND WIRE SHALL CONNECT TO NEUTRAL WIRE AT POLE LUG.

42. ITEM SPECIAL, RE-ERECT EXISTING LIGHT POLE

THE CONTRACTOR SHALL RE-ERECT THE EXISTING TRANSFORMER BASE, LIGHT POLE, BRACKET ARM AND LUMINAIRE ONTO THE EXISTING FOUNDATION.

GENERAL NOTES

42. ITEM 603-8" C.I. SOIL PIPE (SV) WITH 706.12 JOINTS, AS PER PLAN

8" CAST IRON SOIL PIPE (SV) SERVICE WEIGHT WITH JOINTS AS PER 706.12 AND TYPE C BEDDING IS TO BE LOCATED AS SHOWN ON THE PLANS. IT SHALL BE INSTALLED IN COOPERATION WITH THE PLUMBING CONTRACTOR. THE COST OF THE SOIL PIPE SHALL INCLUDE THE TIE-IN. ALL OF THE ABOVE SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR ITEM 603-8" CAST IRON SOIL PIPE (SV) WITH 706.12 JOINTS, AS PER PLAN.

43. UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO STANDARD DRAWING HL-10 FOR DETAILS OF 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 APPROXIMATELY 20 FEET.

44. APPROVED EQUAL MANUFACTURES OR COMPANIES

IT IS INTENDED, THAT IN THOSE LOCATIONS THROUGHOUT THE PLANS AND SPECIAL SPECIFICATIONS WHERE MANUFACTURING COMPANIES OR SOURCES OF MATERIALS ARE LISTED, THE CONTRACTORS' MAY UTILIZE OTHER MANUFACTURING COMPANIES OR SOURCES OF MATERIALS PROVIDED THE INTENT OF THE PLANS AND SPECIAL SPECIFICATIONS IS FOLLOWED.

THE ACCEPTANCE OF THE CONTRACTORS' PROPOSED ALTERNATES WILL BE DETERMINED BY THE SUBMISSION AND APPROVAL OF THE CONTRACTORS' SHOP DRAWINGS OR MATERIAL SELECTIONS.

45. ITEM SPECIAL - ALTERNATE SHELTER HOUSE DESIGN - "SHELTER HOUSE WITH SHINGLED ROOF"

THE CONTRACTOR MAY PROVIDE AN "IRON MOUNTAIN FORGE - PARK SHELTER" (AS MODIFIED BELOW) OR EQUAL AS A SHELTER HOUSE ON THIS PROJECT.

THE SHELTER HOUSE SHALL HAVE A MINIMUM SIZE OF 20' x 26' (ALT 20' x 28') AND SHALL BE MANUFACTURED FROM KILN-DRIED SOUTHERN PINE. THE STRUCTURAL, GLUED LAMINATED TIMBER SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS: AITC-100, 117, 177, 200 AND PS-56-73. A CERTIFICATE OF CONFORMANCE SHALL BE FURNISHED AND THE AITC QUALITY MARK SHALL APPEAR ON ALL LAMINATED MEMBERS. THE ADHESIVE SHALL BE WATERPROOF AND CONFIRMING TO ASTM D-2559-70. THE ROOF DECK SHALL BE NOMINAL 2" x 6" AND BTR, SINGLE TONGUE AND GROOVE WITH V-JOINT FACE SIDE AND SHALL BE FACTORY FINISHED WITH A POTLATCH ACRYLIC POLYMER IN EARTH TONE. THE ASPHALT SHINGLE ROOF SHALL CONFORM TO STD. DRW. LA-16.

THE ROOF SYSTEM SHALL, IN ADDITION TO THE MANUFACTURERS LOADING, BE ABLE TO WITHSTAND 90 MPH WIND LOADS IN CONFORMANCE WITH ARTICLE 9 (OAC 4101: 2-9) OF THE OHIO BASIC BUILDING CODE. THE FABRICATOR SHALL FURNISH COMPLETE SHOP DRAWINGS, SHOWING ALL DETAILS AND CONNECTIONS OF THE COLUMNS AND ROOF SYSTEM, AS WELL AS CALCULATIONS VERIFYING THAT THE SYSTEM SATISFIES THE OHIO BUILDING CODE ARTICLE.

ALL MEMBERS SHALL BE INDIVIDUALLY WRAPPED FOR PROTECTION DURING SHIPPING AND STORAGE, THE COLUMNS AND FACIA SHALL BE TREATED BY THE CELLON (R) PROCESS IN ACCORDANCE WITH STD C-28 AWPA TO A RETENTION OF 0.6 # PER CU. FT. THE CONTRACTOR SHALL PROTECT THE SHELTER HOUSE MATERIALS ON THE JOB SITE. IF STORED TEMPORARILY, MEMBERS SHALL BE PLACED ON BLOCKS WELL OFF THE GROUND AND SEPARATED BY WOOD STRIPS SO THAT AIR CAN CIRCULATE AROUND EACH MEMBER. THE TOP AND BOTTOM SHALL BE COVERED WITH MOISTURE-RESISTANT PAPER. ALL ERECTION WORK SHALL BE PERFORMED USING NON-MARRING SLINGS WHEN MEMBERS ARE TO BE HANDLED.

THE FOOTER, SLAB, HARDWARE AND AGGREGATE BASE SHALL CONFORM TO LA-15. IN ADDITION THE FOUNDATION SHAFTS SHALL HAVE A MINIMUM DIAMETER AND DEPTH OF 2'-0" AND 4'-6" RESPECTIVELY. THE COLUMNS SHALL BE NOMINAL 6"x6"x12'-6". (TYP. 5"x5 1/2"x11'-9" WITH A 9" CLEARANCE TO BOTTOM OF FOUNDATION) WITH 12-8" DECK SPIKES IN EACH COLUMN TO ANCHOR IT IN THE FOUNDATION. THE COLUMN SPACING SHALL BE 8'-0" TYPICAL AND THE OVER-HANG SHALL BE 2'-0" MINIMUM. THE FACIA SHALL BE 1"x6" NOMINAL. THE COLUMN AND FACIA SHALL BE STAINED IN ACCORDANCE WITH LA-16. THE METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE AS PER LA-16.

46. HYDROSTATIC TESTING (SANITARY SEWER)

IN LIEU OF THE HYDROSTATIC (WATER) TEST AS IN 603.06 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, A AIR PRESSURE TEST SHALL BE PERFORMED BY THE CONTRACTOR. THE AIR PRESSURE TEST OF THE PIPE JOINTS SHALL BE MADE AFTER COMPLETION OF THE SEWER.

ALL JOINTS SHALL BE FREE AND CLEAR OF ANY BACKFILL TO ALLOW FOR INSPECTION. THE AIR PRESSURE TEST SHALL BE MADE BETWEEN MANHOLES WITH PRESSURE SET AT 4 P.S.I. AND HOLDING THAT PRESSURE FOR EIGHT MINUTES WITH 0 P.S.I. DROP.

SHOULD ANY SECTIONS OF THE CONDUIT FAIL TO MEET THE TEST REQUIREMENTS, CORRECTIONS SHALL BE MADE UNTIL THE TEST REQUIREMENTS FOR THE SECTION ARE MET.

THE COST OF ALL MATERIALS, EQUIPMENT, LOBOR AND INCIDENTALS NECESSARY FOR PERFORMING THE TEST AND MAKING ANY NECESSARY CORRECTIONS AND REPLACEMENTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PERTINENT CONDUIT.

47. 1½" WATER LINE BURIAL DEPTH AND CLEARANCE

THE 1½" WATER LINE FROM THE BUILDING TO THE WASTE WATER TREATMENT PLANT SHALL BE INSTALLED A MINIMUM OF 48 INCHES BELOW THE GROUND LINE.

WHERE THE WATER LINE AND SANITARY LINE CROSSES, THERE SHALL BE A MINIMUM OF 24 INCHES VERTICAL SEPARATION FROM THE SANITARY LINE.

48. WATER FOR THIS PROJECT SHALL BE FURNISHED FROM A MUNICIPAL WATER SYSTEM. SHOWN ON THE PLAN SHEETS ARE GENERAL, PLUMBING AND ELECTRICAL DESIGN FEATURES FOR BOTH A MUNICIPAL AND WELL WATER SYSTEM. ALL ITEMS SHOWN IN ASSOCIATED WITH INSTALLING A WELL WATER SYSTEM TO THE MOTORIST SERVICES BUILDING ARE NOT APPLICABLE FOR THIS PROJECT.

SEEDING, SODDING AND TOPSOIL

To establish a good lawn in areas not covered under specific pay items such as 603 - Storm & Sanitary Sewers and 625 - Electrical Conduits & Cables, when directed by the Engineer, approved topsoil shall be spread 3" deep over all bare or disturbed soil and the lawn areas sodded or seeded. (See sheet No. 13 for estimated quantities.)

Finish grading shall be adjusted where necessary to maintain proper ground line where topsoil and sod are required.

Rev. 12-13-84

GENERAL SUMMARY

CALC. BY
DATE
CHKD. BY HWB
DATE 7-2-84

GUERNSEY COUNTY
GUE-70-19.37

OHIO
FHWA REGION 5

5
66

QUANTITIES BY: JH 4-24-84
CHECKED BY: AO 4-25-84

SHEET NUMBER													ITEM	TOTAL	UNIT	DESCRIPTION
2	7	11	12	13	14	15	16		35		50	R.P. No.				GENERAL CONTRACT
		LUMP										1	201	LUMP	-	CLEARING AND GRUBBING, AS PER PLAN
		LUMP										2	202	LUMP	-	STRUCTURES, FOUNDATIONS, AND SLABS REMOVED
		1										3	202	1	EACH	PRIVY VAULT REMOVED, AS PER PLAN.
		3512										4	202	3512	S.F.	WALK REMOVED
		280										5	202	280	L.F.	CURB REMOVED
				LUMP			LUMP					6	203	LUMP	-	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
				LUMP			LUMP					7	203	LUMP	-	EMBANKMENT
							4.0		860 ✓			8	304	900	C.Y.	AGGREGATE BASE
			298				400					9	452	698	S.Y.	7" PLAIN PORTLAND CEMENT CONCRETE PAVEMENT, AS PER PLAN
							1					10	601	1	C.Y.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
							0.60					11	602	0.60	C.Y.	CONCRETE MASONRY
							30					12	603	30	L.F.	6" CONDUIT, TYPE B
				410								13	603	410	L.F.	6" CONDUIT, TYPE F
				365								14	603	365	L.F.	8" CAST IRON SOIL PIPE (SV) WITH 706.12 JOINTS, AS PER PLAN
							36					15	603	36	L.F.	12" CONDUIT, TYPE D
				3								16	604	3	EACH	MANHOLE, STANDARD NO. 3, WITH FLAT SLAB TOP, AS PER PLAN
				2								17	604	2	EACH	CATCH BASIN, STANDARD NO. 2-2-B.
							380					18	607	380	L.F.	FENCE, TYPE CL, 72", MODIFIED AS PER PLAN
				540								19	605	540	L.F.	4" UNCLASSIFIED PIPE UNDERDRAINS
							1					20	607	1	EACH	GATE, TYPE CL, 72" x 12' WIDE, DOUBLE SWING, MODIFIED AS PER PLAN
			2									21	608	2	EACH	CURB RAMP, STANDARD TYPE 1
			207									22	608	207	S.F.	6" CONCRETE WALK W/PAVERS, AS PER PLAN
			4906									23	608	4906	S.F.	4" CONCRETE WALK, AS PER PLAN
			1432									24	608	1432	S.F.	6" CONCRETE WALK, AS PER PLAN
		210										25	609	210	L.F.	CURB, STANDARD TYPE 7
			39									26	609	39	L.F.	CURB, STANDARD TYPE 2A
	58											27	630	58	S.F.	SIGN, EXTRUSHEET TYPE G
	36											28	630	36	L.F.	GROUND MOUNTED SUPPORT, W 10 x 11.5
	2.2											29	630	2.2	C.Y.	CONCRETE FOR EMBEDDED FOUNDATION
	2											30	630	2	EACH	BREAKAWAY BEAM CONNECTION
				378								30.01	653	378	C.Y.	TOPSOIL FURNISHED AND PLACED
				2,676					8,370 ✓			31	659	11,046	S.Y.	SEEDING & MULCHING
				0.41					0.75 ✓			32	659	1.16	TON	COMMERCIAL FERTILIZER
				1,855								33	660	1,855	S.Y.	SODDING, AS PER PLAN

GENERAL SUMMARY

CALC. BY	
DATE	
CHKD. BY	HWD
DATE	7-26-84

GUERNSEY COUNTY
GUE-70-19.37

OHIO
FHWA REGION 5

6
66

QUANTITIES BY: JH 4-24-84
CHECKED BY: AD 4-25-84

SHEET NUMBER													ITEM	TOTAL	UNIT	DESCRIPTION		
2	7	11	12	13	14	14A	15C	15D	16		50	R.P. No.				GENERAL CONTRACT (CONTINUED)		
																BOTANICAL NAME--COMMON NAME	SIZE	COND.
					32							34	661	32	EACH	ALYSSUM SAXATILE "CPTM"--BASKET OF GOLD (YELLOW)	2 YR.	4" POT
					104							35	661	104	EACH	HEMEROCALLIS SPECIES - DAYLILY (RED & YELLOW CLS.)	2 YR.	CL or POT
											4	36	661	4	EACH	PARTHENOCISSUS TRICUSPIDATA--BOSTON IVY	2 YR.	2 CONT
					32							37	661	32	EACH	RUDBECKIA FULGIDA 'GOLDSTURM'- GOLDS. CONEFLOWER	2 YR.	4" POT
					18							38	661	18	EACH	STACHYS BYZANTINA - LAMB'S EAR	2 YR.	4" POT
					2,250							39	661	2,250	EACH	VINCA MINOR - COMMON PERIWINKLE	1 YR. BNDL.	FLATS
									30			40	662	30	EACH	CORNUS RACEMOSA - GRAY DOGWOOD	2'-3'	3 CONT.
					48						50	41	662	98	EACH	COTONEASTER DAMMERI "CORAL BEAUTY"--CORAL BEAUTY COTONEASTER	15"-18"	2 CONT.
											12	42	662	12	EACH	FORSYTHIA VIR. BRONXENSIS--BRONX FORSYTHIA	15"-18"	3 CONT.
					16				31			43	662	47	EACH	JUNIPERUS CHINENSIS "SEA GREEN"--SEA GREEN JUNIPER	18"-24"	3 CONT.
											42	44	662	42	EACH	PYRACANTHA ANG."GNOME"--GNOME FIRETHORN	24"-30"	3 CONT.
					12							45	662	12	EACH	ROSA FLOR. 'THE FAIRY'- FAIRY ROSE	NO. 1	POTTED
									31			46	662	31	EACH	RHUS AROMATICA--FRAGRANT SUMAC	2'-3'	3 CONT.
					4						8	47	662	12	EACH	TAXUS MEDIA DENSIFORMIS--DENSE YEW	24"-30"	B&B 14"
					9						14	48	662	23	EACH	VIBURNUM BURKWOODII--BURKWOOD VIBURNUM	30"-36"	B&B 12"
					5	9						49	663	14	EACH	ACER RUBRUM 'AUTUMN FLAME' - AUT. FLAME RED MAPLE	2"-2½"	B&B 28"
					3							50	663	3	EACH	CRATAEGUS VIR. 'WINTERKING'- WINTERKING HAWTHORN	2"-2½"	B&B 28"
					5	9					2	51	663	16	EACH	FRAXINUS AMERICANA "AUTUMN PURPLE"--AUTUMN PURPLE WHITE ASH	2"-2 1/2	B&B 28"
					4	4						52	663	8	EACH	MALUS SARGENTII "WHITE ANGEL"--WHITE ANGEL FLOWERING CRABAPPLE	1"-1 1/2	B&B 20"
					5	3						53	663	8	EACH	MALUS ZUMI CALOCARPA - REDBUD CRABAPPLE	1"-1½"	B&B 20"
					7	15						54	663	22	EACH	PICEA ABIES--NORWAY SPRUCE	5'-6'	B&B 22"
									9			55	663	9	EACH	PINUS NIGRA-- AUSTRIAN PINE	5'-6'	B&B 22"
					5	15			3			56	663	23	EACH	PSEUDOTSUGA MENZIESII - DOUGLAS FIR	5'-6'	B&B 22"
					5							57	664	5	EACH	PLANTING SALVAGED PLANTS	3"-5" CAL	B&B 54"
			71									58	SPEC.	71	L.F.	2" x 4" WOOD EDGING		
					23						6	59	SPEC.	29	EACH	BOULDERS.		
		5										60	SPEC.	5	EACH	CHARCOAL GRILL & SERVING TABLE W/SLAB		
		7										61	SPEC.	7	EACH	CONCRETE SLAB FOR PICNIC TABLES		
		20										62	SPEC.	20	EACH	PICNIC TABLE		
			1									63	SPEC.	1	EACH	MOTORIST SERVICES BUILDING & STORAGE UNIT (EXCEPT ELECTRICAL, PLUMBING, HEATING & VENTILATION WORK)		
		17										64	SPEC.	17	EACH	WASTE RECEPTACLE SLEEVE & SLAB		
			1									65	SPEC.	1	EACH	SHELTER HOUSE WITH SHINGLED ROOF		
		807										66	SPEC.	807	L.F.	SNOW FENCE - TREE PROTECTION		
					5							67	SPEC.	5	EACH	WOOD BENCH, 72" x 18"		
									1			68	SPEC.	1	EACH	COMPLETE WASTE TREATMENT SYSTEM (EXCEPT ELECTRICAL WORK)		
																WATER LINE (SEE SHEET 35 FOR QUANTITIES)		
LUMP													614	LUMP		MAINTAINING TRAFFIC		
LUMP													619	LUMP		FIELD OFFICE		
LUMP													623	LUMP		CONSTRUCTION LAYOUT STAKES		
LUMP													624	LUMP		MOBILIZATION		
																TOTAL BID GENERAL CONTRACT		
																PLUMBING CONTRACT		
								60				1	603	60	L.F.	2"TYPE "K"HARD COPPER WATER LINE		
								1				2	SPEC.	1	EACH	MOTORIST SERVICES BUILDING & STORAGE UNIT (PLUMBING ONLY)		
							475						603	475	L.F.	COLD WATER SERVICE TO SEWAGE TREATMENT PLANT (1-1/2" TYPE "K", TRENCH & HYDRANT)		
LUMP													624	LUMP		MOBILIZATION		
								260				3	603	260	L.F.	1"TYPE "K"HARD COPPER WATER LINE		
								LUMP				4	603	LUMP		DRINKING FOUNTAIN,JUG FILLER & 6 HYDRANTS		
																TOTAL BID PLUMBING CONTRACT		
																HEATING & VENTILATION CONTRACT		
								1				1	SPEC.	1	EACH	MOTORIST SERVICES BUILDING & STORAGE UNIT (HEATING & VENTILATION ONLY)		
LUMP													624	LUMP		MOBILIZATION		
																TOTAL BID HEATING & VENTILATION CONTRACT		

COLUMBUS ENGINEERING CONSULTANTS, LTD.
Rev. 12-13-84

GENERAL SUMMARY

CALC. BY		GUERNSEY COUNTY	OHIO	SA
COMP. BY HWD		GUE-70-19.37	FHWA REGION 5	66
DATE 7-26-84				

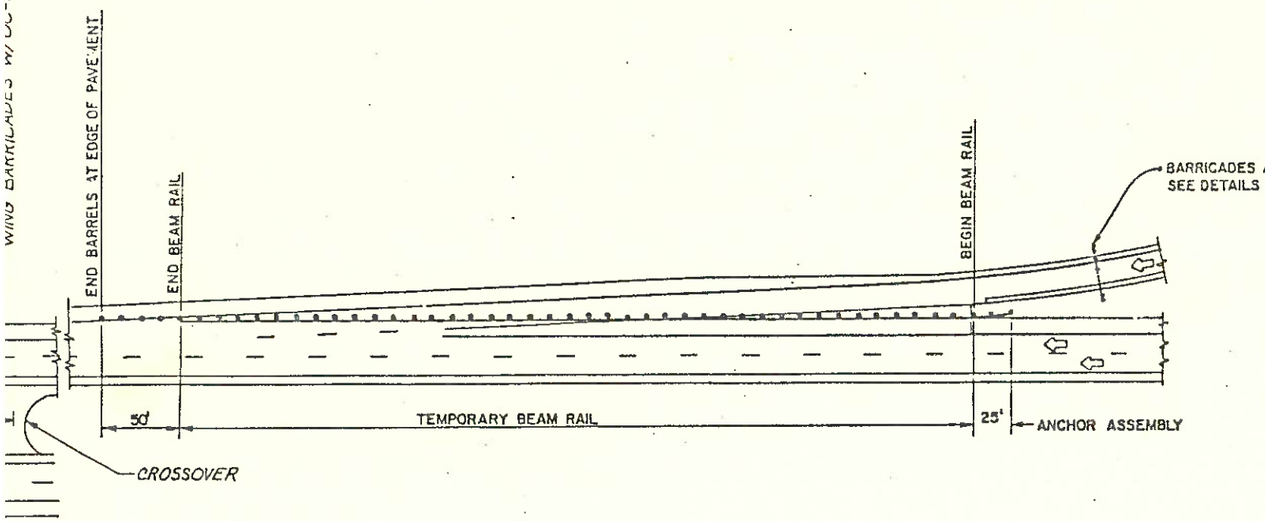
SHEET NUMBER 15C	15D	Bar No.	ITEM	QUANT.	UNIT	DESCRIPTION
						ELECTRICAL CONTRACT
1		1	625	1	EACH	REMOVE EXISTING ELECTRICAL SERVICE POLE AND DISCONNECT SWITCH, RETURN TO O.D.O.T..
176		2	625	176	LN.FT.	4" COND. AS PER 713.04
749		3	625	749	LN.FT.	NO. 10 AWG. PULL WIRE
4,587		4	625	4587	LN.FT.	36" TRENCH AS PER PLAN
133		5	SPEC	133	LN.FT.	PLASTIC CAUTION TAPE
578		6	625	578	LN.FT.	2" COND. AS PER 713.04
977		7	625	977	LN.FT.	3" COND. AS PER 713.04
175		8	625	175	LN.FT.	500 MCM, TYPE USE RHH/RHW, 600V., CONDUCTORS
12		9	625	12	EACH	500 MCM, TYPE USE RHH/RHW, 600V. CABLE CONNECTOR LUGS.
1		10	625	1	EACH	400 AMP. CURRENT METER SOCKET (MOUNTING ONLY)
20		11	625	20	LN.FT.	1 1/2" COND. AS PER 713.04
24		12	625	24	EACH	GROUND ROD AS PER 625.10 AND 713.16 DWG HL-9
40		13	625	40	LN.FT.	NO. "0" AWG, TYPE USE RHH/RHW, 600V. COND. GREEN GRD.
2		14	625	2	EACH	BONDING JUMPER CONNECTIONS PER ARTICLE 250 (NEC)
1		15	625	1	EACH	LIGHTING ARRESTOR AS PER 625.18
LUMP		16	625	LUMP		EXISTING UNDERGROUND SECONDARY ELECTRICAL SERVICE, ABANDON OR REMOVE
LUMP		17	625	LUMP		EXISTING UNDERGROUND TELEPHONE SERVICE, ABANDON OR REMOVE
4		18	625	4	EACH	PULL BOX, 24" CONC., AS PER 713.08 DWG HL-10 (TELEPHONE)
998		19	625	998	LN.FT.	24" TRENCH AS PER PLAN
2,085		20	625	2,085	LN.FT.	NO. 4/0 AWG TYPE USE RHH/RHW, 600V. CONDUCTORS.
2,480		21	625	2,480	LN.FT.	NO. 12AWG, SIGNAL CONDUCTORS (2-ACTIVE, 2-SPARE)
5,985		22	625	5,985	LN.FT.	NO. 4 AWG. U.L. TYPE MV-90 DRY, 5000V.CONDUCTORS/713.02
33		23	625	33	EACH	PULL BOX 24" CONC., AS PER 713.08 DWG. HL-10 (ELECTRICAL)
20		24	625	20	EACH	CABLE SPLICING KITS AS PER 713.15(5)
720		25	605	720	LN.FT.	4" SHALLOW PIPE UNDERDRAINS AS PER 605 DWG. HL-10
73		26	625	73	LN.FT.	2 1/2" COND. AS PER 713.04
3		27	625	3	EACH	BRUNDY QIK LUGS FOR COPPER CONDUCTORS
1		28	625	1	EACH	LIGHT POLE AT-B-34.2 AS PER 625.05, 713.01 DWG HL-8(12' ARM)
3		29	625	3	EACH	LIGHT POLE FOUNDATION AS PER 625.06
1		30	625	1	EACH	LUMINAIRE FOR AT-B-34.2
95		31	625	95	LN.FT.	POLE AND BRACKET CABLE, NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000V.
2		32	625	2	EACH	REMOVE AND RE-INSTALL EXISTING LIGHT POLE. REMOVE EXISTING FOUNDATION
	270	33	625	270	LN.FT.	1 1/4" COND. AS PER 713.04
	555	34	625	555	LN.FT.	NO. 10 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS.
	495	35	625	495	LN.FT.	NO. 12 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS.

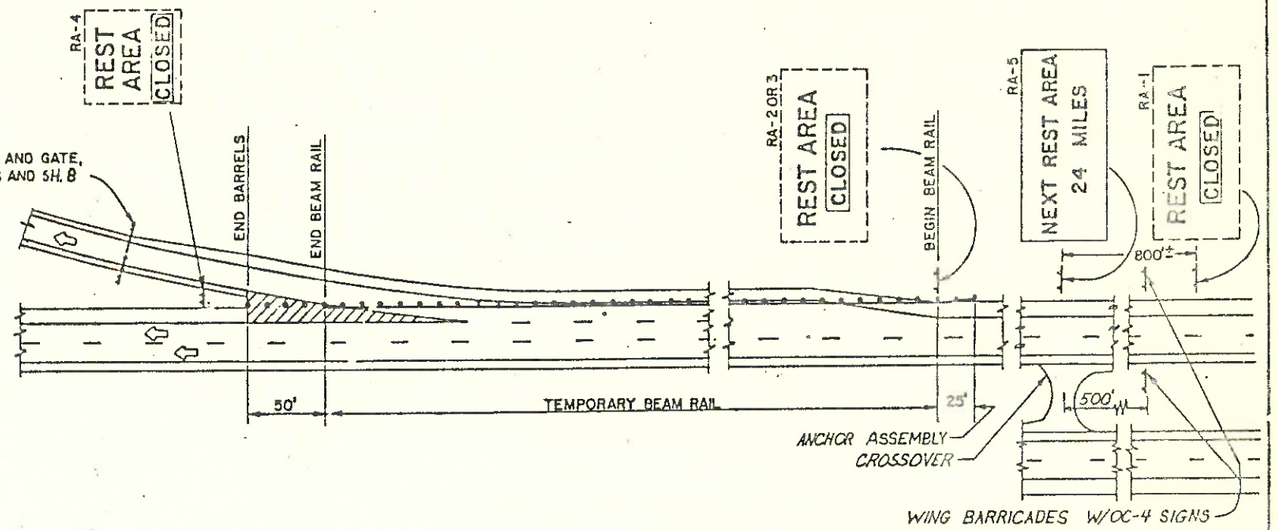
GENERAL SUMMARY

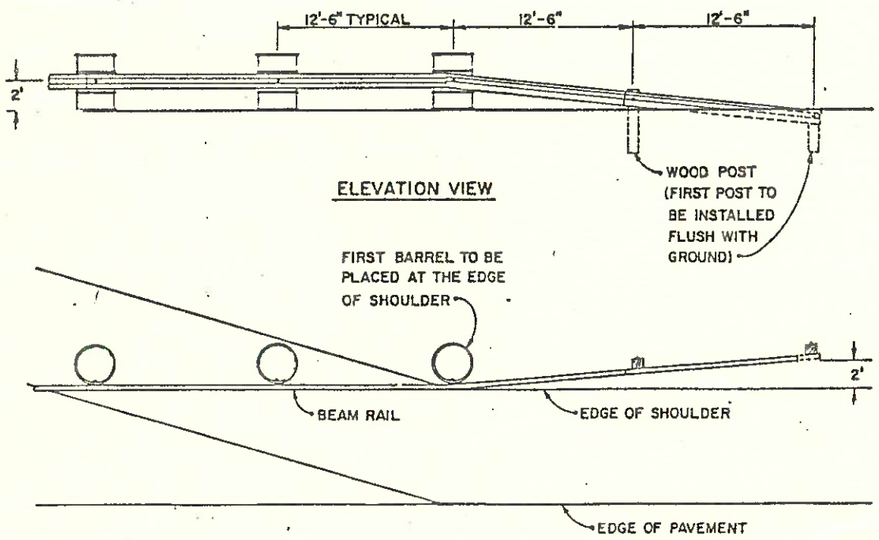
CALC. BY / CHECKED BY / DATE 7-26-74	GUERNSEY COUNTY GUE-70-19.37	OHIO FHWA REGION 5	68 66

SHEET NUMBER 15D	Rev. No.	ITEM	QUANT.	UNIT	DESCRIPTION
					ELECTRICAL CONTRACT (CONTINUED)
1	36	625	1	EACH	WIRING FLAGPOLE LIGHT FIXTURES AS PER PLAN
1	37	625	1	EACH	FURNISHING & INSTALLING RECEPTACLE POWER PEDESTAL.
4,235	38	625	4,235	LN.FT.	2" DUCT CABLE W/3 L/C No. 4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS, PER 713.03, 713.02.
46	39	625	46	EACH	CONNECTOR KIT, TYPE II, AS PER 713.15(2), DWG, HL-9.
46	40	625	46	EACH	REMOVE EXISTING CONNECTOR KITS TYPE II AT EXISTING LIGHT POLES.
23	41	625	23	EACH	REMOVE EXISTING GROUND CONNECTORS AT EXISTING LIGHT POLES
30	42	625	30	LN.FT.	4" STEEL CONDUIT AS PER 713.04, JACKED UNDER PAVEMENT, AS PER PLAN.
30	43	625	30	LN.FT.	4" STEEL CONDUIT SLEEVE AS PER 713.04 INSTALL PRIOR TO POURING CONCRETE DRIVE.
1	44	SPEC.	1	EACH	MOTORIST'S SERVICES BUILDING (ELECTRICAL ONLY)
1	45	SPEC.	1	EACH	COMPLETE WASTE TREATMENT SYSTEM (ELECTRICAL ONLY)
LUMP	46	839	LUMP		HIGH VOLTAGE TEST
		624	LUMP		MOBILIZATION
		839		LUMP	HIGH VOLTAGE TEST
			TOTAL BID ELECTRICAL CONTRACT		

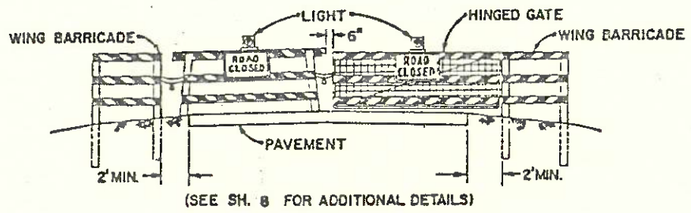
WING BARRICADES W/OC-6 SIGNS







TEMPORARY ANCHOR ASSEMBLY



BARRICADES AND GATE

NOTES:

1. REST AREA SIGNS (RA-1 THRU RA-4) SHALL HAVE THE ACTION MESSAGE COVERED BY AN OVERLAY BEARING THE LEGEND "CLOSED". THIS PANEL SHALL HAVE A BLACK LEGEND ON A REFLECTORIZED ORANGE BACKGROUND. THE OVERLAY FOR THE RA-1, RA-2 AND RA-3 SIGNS SHALL BE 3'X1½'. THE OVERLAY FOR THE RA-4 SIGNS SHALL BE 4'X1½'.
2. SUPPLEMENTAL PANELS LOCATED UNDER MAINLINE REST AREA SIGNS SHALL BE REMOVED OR COVERED WHEN THE REST AREA IS CLOSED. (EXAMPLE: TELEPHONE, TOURIST INFO, HANDICAPPED SYMBOL SIGN).
3. TEMPORARY BEAM RAIL, IN ACCORDANCE WITH ODOT CONSTRUCTION AND MATERIAL SPECIFICATION 606.04, SHALL BE USED TO CLOSE THE ACCELERATION AND DECELERATION LANES FOR REST AREA CLOSURES EXCEEDING 7 DAYS. (FOR DETAILS ON ANCHOR ASSEMBLIES AND GUARDRAIL FLARES, SEE TEMPORARY ANCHOR ASSEMBLY DETAIL.) FOR REST AREA CLOSURES OF LESS THAN 7 DAYS, THE DECELERATION AND ACCELERATION LANES SHOULD BE CLOSED WITH REFLECTORIZED DRUMS PLACED 15' CENTER TO CENTER. THE EXISTING SHOULDER WIDTH SHALL BE MAINTAINED AT ALL TIMES.
4. WHERE REST AREA RAMP LIGHTING EXISTS, IT SHALL BE MAINTAINED IN PROPER CONDITION TO PROVIDE OPTIMUM ILLUMINATION.
5. REST AREA SIGN RA-5 SHALL BE ADDED WITH PROPER MILEAGE SHOWN. DURING CLOSURE THE WORDS "OPEN" SHALL BE ADDED WITH BLACK ON ORANGE REFLECTORIZED OVERLAY. THE OVERLAY SIZE IS 3 1/2' X 1 1/2'. LOCATION TO BE APPROVED BY THE ENGINEER.
6. GATES AND BARRICADES, IN ACCORDANCE WITH SH. 8 SHALL BE ERECTED ACROSS THE EXIT AND ENTRANCE RAMPS FOR THE REST AREA.

ESTIMATED QUANTITIES FOR EXTRU-SHEET SIGNS TO BE INCLUDED IN THE GENERAL SUMMARY, SHEET

ITEM	DESCRIPTION	UNIT	QUANT.
630	SIGN, EXTRUSHEET TYPE G	SQ.FT.	58
630	GROUND MOUNTED SUPPORT, W10X11.5	L.F.	36
630	CONCRETE FOR EMBEDDED FOUNDATION	C.Y.	2.2
630	BREAKAWAY BEAM CONNECTIONS	EA.	2

THESE ITEMS AND QUANTITIES SHALL BE FIELD CHECKED AND APPROVED BY THE ENGINEER.

7. THE FOLLOWING MILEAGES SHALL BE INCLUDED ON THE RA-5 SIGNS ON THIS PROJECT:
   E.B. RA-5 PERMANENT MILEAGE 24

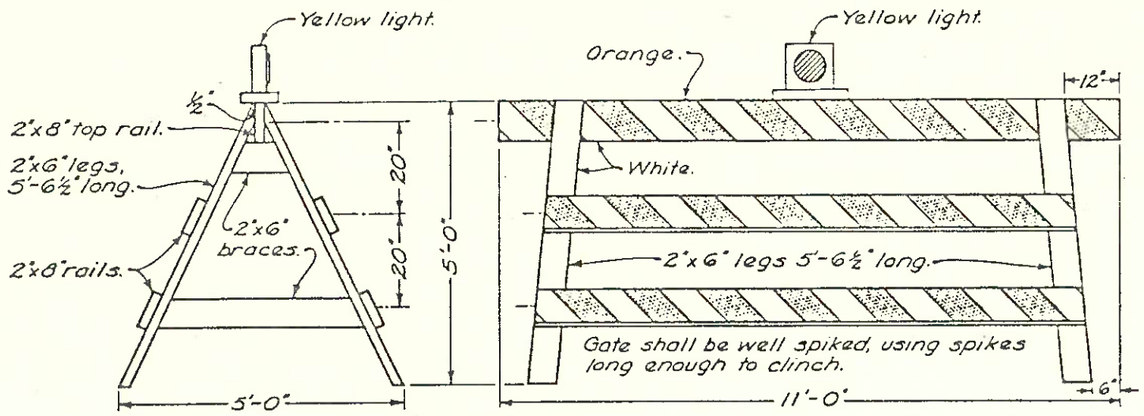
1-19-82
12/31/81 JMB

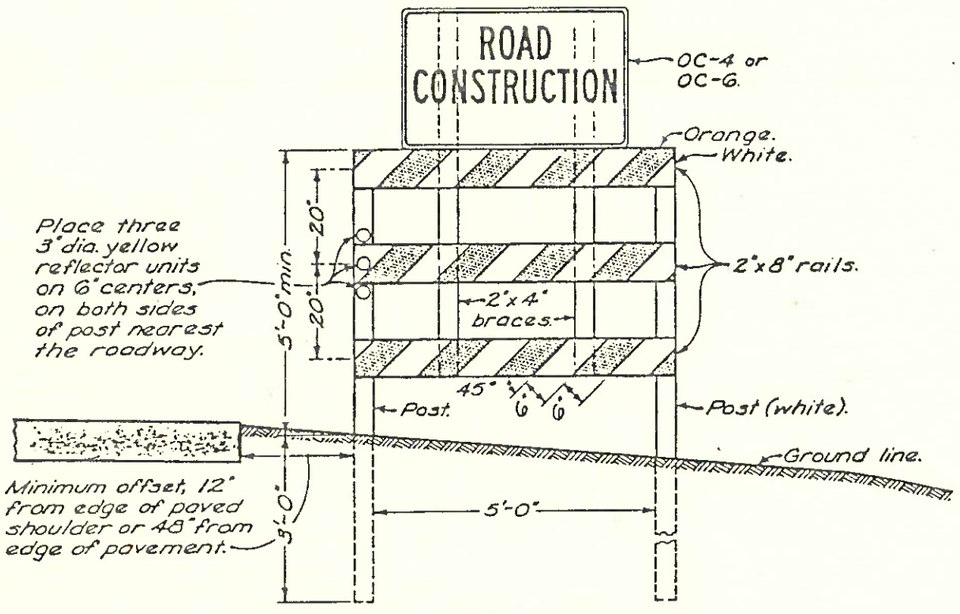
FHWA REGION	STATE	PROJECT	
5	OHIO		

8
66

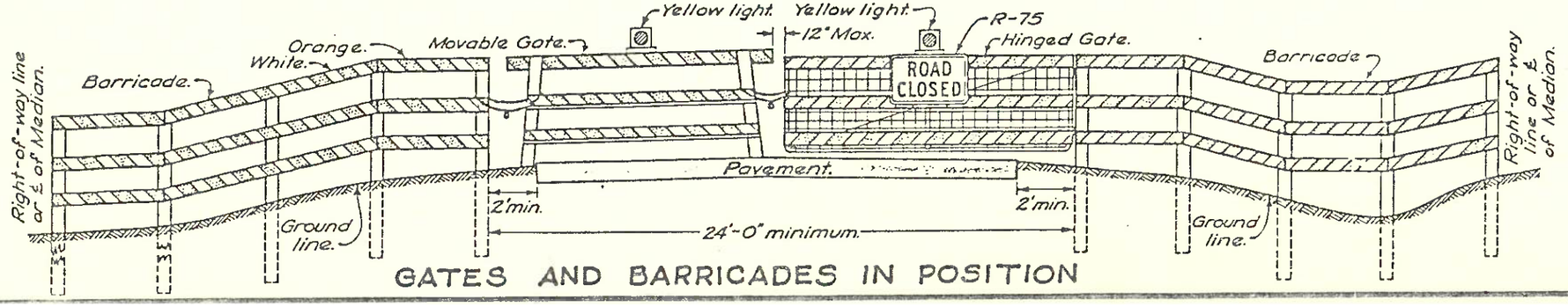
GUERNSEY COUNTY
GUE-70-19.37

MOVABLE GATE





WING BARRICADE



GATES AND BARRICADES IN POSITION

NOTES

BARRICADES shall be constructed according to details shown. Where traffic is maintained during construction, wing barricades shall be used on each shoulder: (1) at both ends of the project, (2) on all interchange entrance ramps or on the cross road preceeding the entrance ramp, (3) on all other major approach roads as directed by the Engineer. When the road is closed to traffic, barricades and gates shall be used to effectively close the entire roadway including the median of divided highways. In urban areas and at locations where it is impracticable to extend the barricade to the right-of-way line because of a sidewalk or other obstruction, the ends of the barricade shall be located as directed by the Engineer to effect the desired closing of the highway.

PAINTING AND REFLECTORIZATION: All rails of the barricades and gates shall be reflectorized with orange and white reflectorized sheeting in 6" wide alternate stripes which slope downward toward the center line of the road at an angle of 45%. All three rails of the Road Closed barricade shall be striped on the side facing traffic. All three rails of the wing barricade and all gate rails shall be striped on both sides. All posts, braces, gate legs and any unstriped rails shall be painted white.

GATES: One gate shall be erected for each traffic lane. Gates shall be chained and padlocked to one another and to adjacent posts of the barricades. Chains shall be ¼" stock or larger with welded links.

A hinged gate may be used and shall be an approved 12' by 4' steel frame form type, or a type approved by the Engineer. The gate shall be hung on hinge screw hooks, or as otherwise approved. Striping similar to that used on the movable gate shall be accomplished with 1"x8" lumber or with metal strips fastened to the gate. The gate shall be supported at the center in an approved manner.

YELLOW LIGHT: Each gate shall be equipped with a steady burning yellow light, conspicuously visable at all distances up to 1000' under normal atmospheric conditions. The light, operated by battery, electric generator, commercial power or propane gas, shall be in operation at all times between sunset and sunrise during the period the highway is closed.

SIGNS: Where the road is closed to traffic by the erection of gates and barricades, a ROAD CLOSED sign (R-75) shall be mounted on the gate as shown. On three-lane pavement, the sign shall be mounted on the middle gate facing traffic.

Where traffic is maintained, a ROAD CONSTRUCTION TRAFFIC MAINTAINED sign (OC-4) shall be used on the right shoulder wing barricade on the approaches to major construction or maintenance jobs less than 2 miles in length. A ROAD CONSTRUCTION NEXT __ MILES sign (OC-6) shall be used on the right shoulder wing barricade on the approaches to any major construction or maintenance job of 2 miles or more in length. An END CONSTRUCTION sign (OC-8) shall be erected above the right hand wing barricade facing traffic leaving the construction section. The signs on the wing barricades shall be erected above the top rail of the wing barricade on braces, as detailed hereon.

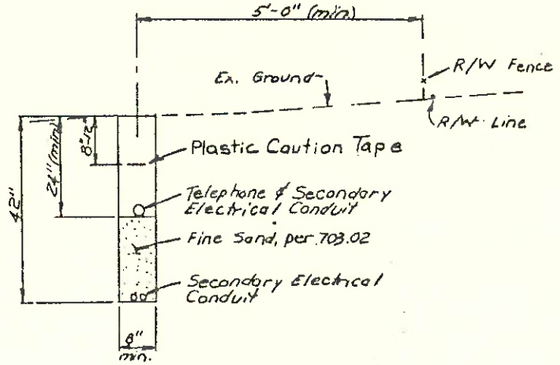
LUMBER used in the construction of the gates and barricades shall be No. 1 common yellow pine or No. 1 common Douglas fir, surfaced on four sides standard, or other materials approved by the Engineer. All sizes are nominal.

POSTS shall be sound 4"x4" sawed or 4½" round. Rails of the barricade shall be bolted to the posts with ⅝" bolts.

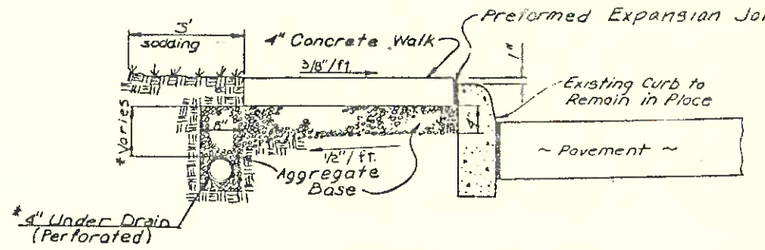
FHWA REGION	STATE	PROJECT	
5	OHIO		

9/66

GUERNSEY COUNTY
GUE-70-19.97

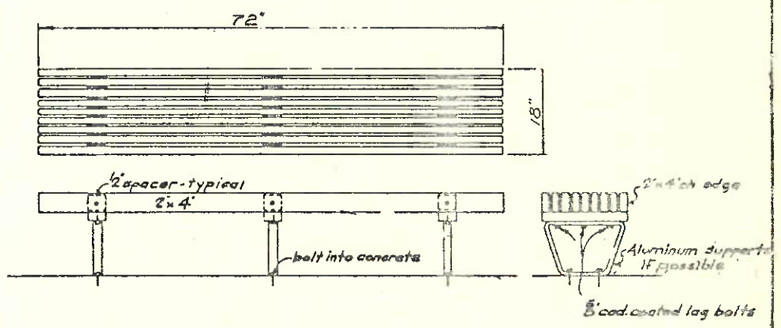


TRENCH DETAILS
UTILITY CABLES
& CONDUIT

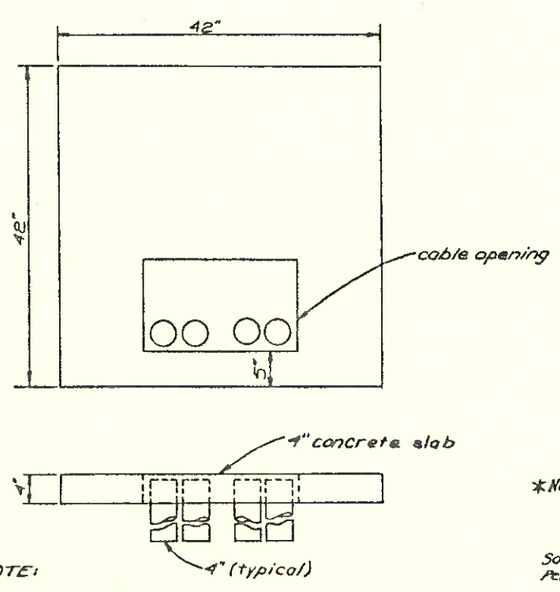


*See sheet 13 for Elevations

PROPOSED WALK AND
EXISTING CURB DETAIL



WOOD BENCH ~ TYPICAL DETAIL
(SEE SHEET 50)



NOTE:

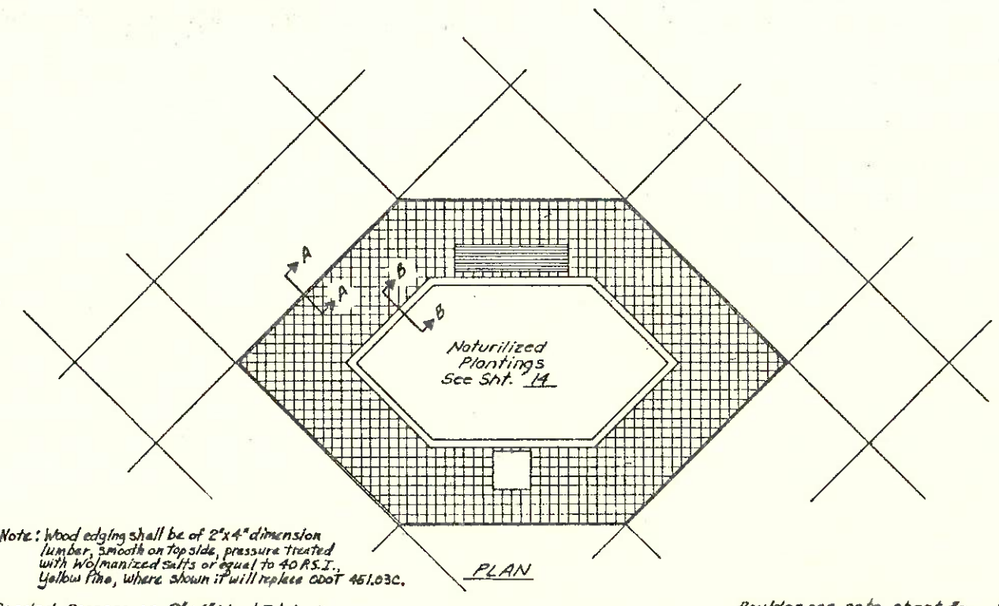
(1) Conduits from transformer pad to the terminator pole are to be placed on the left side of the cable opening.

(2) Conduits from transformer pad to the building are to be placed on the right side of the cable opening.

(3) Conduits are not to extend above top surface of transformer pad.

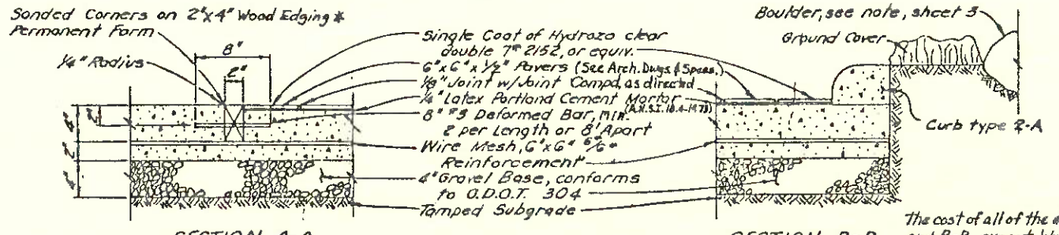
(4) Transformer pad to be constructed by Guernsey-Muskingum Electrical Co-op.

TRANSFORMER PAD DETAIL
(FOR INFORMATION ONLY)



PLAN

* Note: Wood edging shall be of 2"x4" dimension lumber, smooth on top side, pressure treated with Wolmanized salts or equal to 40 P.S.I. Yellow Pine, where shown it will replace ODOT 451.03C.

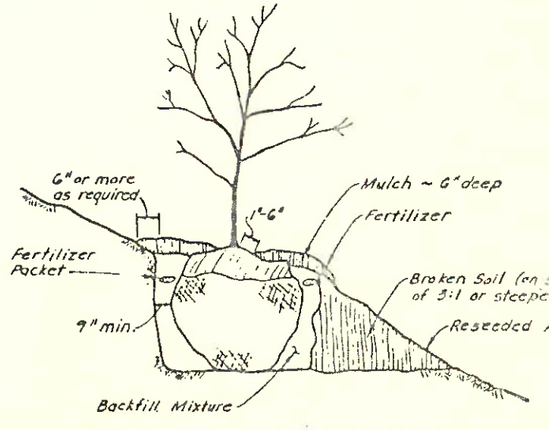


SECTION A-A

SECTION B-B

PLAZA PLANTER DETAIL
(SEE SHEET #12 FOR QUANTITIES)

The cost of all of the above shown in sections A-A and B-B, except Wood Edging and Curb, shall be included in the unit price bid for Item 608-6" Concrete Walk with Pavers, as per plan.



PLANTING DETAIL

CALC. BY		GUERNSEY COUNTY GUE-70-1937	OHIO	10
DATE			FHWA REGION 5	66
CHKD. BY				
DATE				

SCALE IN FEET
50 0 50 100

N

177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192

N76°-25'-11"E

℄ I.R. 70

24" C.M.P.

EASTBOUND LANES

Pt "C" 89+06.03 (I.P.)

Pt "D" 79+02.83 (I.P.)

B.M. #2
Point Mark @ N.W. Cor. Conc. Light P. Base
El. 934.88

℄ SURVEY

Existing Truck Parking

Existing Auto Parking

Ex. Information Shelter

PROPOSED MOTORISTS SERVICE BUILDING

Shelter

Ex. Well

PROPOSED TREATMENT FACILITY

B.M. #1
Spike in N. Side of Power Pole
El. 929.89

PROPOSED SERVICE DRIVE

PROPOSED SHELTER HOUSE

Ex. L.A. R/W

Ex. R/W

Field Drive

Well

House

Tank

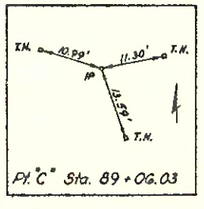
Shed

C.R. 670 (Formerly U.S. 40)

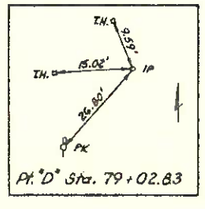
24" Conc.

8" Water

● Test Boring Location



Pt "C" Sta. 89+06.03



Pt "D" Sta. 79+02.83

REFERENCES

FHWA REGION	STATE	PROJECT	
5	OHIO		

11/66

GUERNSEY COUNTY
GUE-70-19.37

SCALE IN FEET
0 20 40

N

Existing Truck Parking

Existing Auto Parking

Existing Curb to Remain in Place

Existing Bulletin Board

Existing Curb to Remain in Place

Existing Privy

Existing Well Shelter To remain in place

Existing Picnic Shelter

Existing Information Shelter

PROPOSED MOTORISTS SERVICE BUILDING

PROPOSED SHELTER HOUSE

NOTE:
The Proposed Shelter House will be Furnished with Four (4) Picnic Tables, as per Std. Dwg. LA-13

C.R. 670 (Formerly U.S. 40)

4" Ash
7" Ash
16" Ash
3" Maple
6" Maple
3½" Maple

ESTIMATED QUANTITIES

REF NO.	201 CLEAN & GRUBB	202 STRUCTURE REMOV.	202 PRIVY VAULT REMOV.	202 WALK REMOV.	202 CURB REMOV.	609 CURB, TYPE 7	SPEC. WASTE RECEPT. SLV. & SLB.	SPEC. GRILL & TABLE W/SLAB	SPEC. SNOW FENCE	SPEC. PICNIC TABLE	SPEC. PICNIC TABLE SLABS
	LUMP	LUMP	EA.	S.F.	L.F.	L.F.	EA.	EA.	L.F.	EA.	EA.
P-1			1								
R-1		LUMP									
R-2		LUMP									
R-3		LUMP									
R-4		LUMP									
W-1				2316							
W-2				640							
W-3				120							
W-4				90							
W-5				125							
W-6				125							
W-7				96							
T										20	7
G								5			
C-1					40	5					
C-2					60	60					
C-3					30	30					
C-4					45	45					
C-5					75	70					
C-6					30						
S-1							17				
F-1									807		
R-5		Lump									
Total	Lump	Lump	1	3512	280	210	17	5	807	20	7

LEGEND

- Trees/Shrubs to be removed
- Trees to be salvaged or relocated
- Existing Plant Material
- Existing Buildings to be removed
- Sidewalks & Curbs to be removed
- Existing Picnic Table & Grill
- " " " " To be Removed
- Proposed Picnic Table & Grill as per Std. Dwgs. LA-10 & LA-13
- Waste Receptacle Sleeve W/Slab as per Std. Dwgs. LA-14
- Existing Light Pole
- Proposed Wood Bench
- Areas to be protected by Snow Fence, as per General Notes.

COLUMBUS ENGINEERING CONSULTANTS, LTD.

DEMOLITION PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

12
66

GUERNSEY COUNTY
GUE-70-19.97

SCALE IN FEET
0 10 20

N

NOTE:
The Blue Star Memorial Highway Monument shall be Relocated from its Current Location to a New Location Approximately 75 Feet Due West. The New Location shall be as Directed by the Engineer in Consultation with the District Landscape Architect or Horticulturist. Concrete base shall be constructed as directed by the Engineer.
Payment for the above shall be included in lump sum bid, Item 202, Clearing and Grubbing.

ESTIMATED QUANTITIES

REF NO.	452 7" PLAIN PTLD. CMT. CONC. PVT. S.Y.	608 CURB RAMP TYPE 1 EA.	608 4" CONC. WALK S.F.	SPEC. SHELTER HOUSE EA.	SPEC. MOTORIST SERVICE BUILDING EA.
A-1	298				
A-2			478		
A-3			1153		
A-5			702		
A-6			112		
A-7			15		
A-8		1			
A-10		1			
A-11			2196		
A-12			125		
A-13			125		
B-1					1
B-2				1	
Total	298	2	4906	1	1

ESTIMATED QUANTITIES (PLAZA)

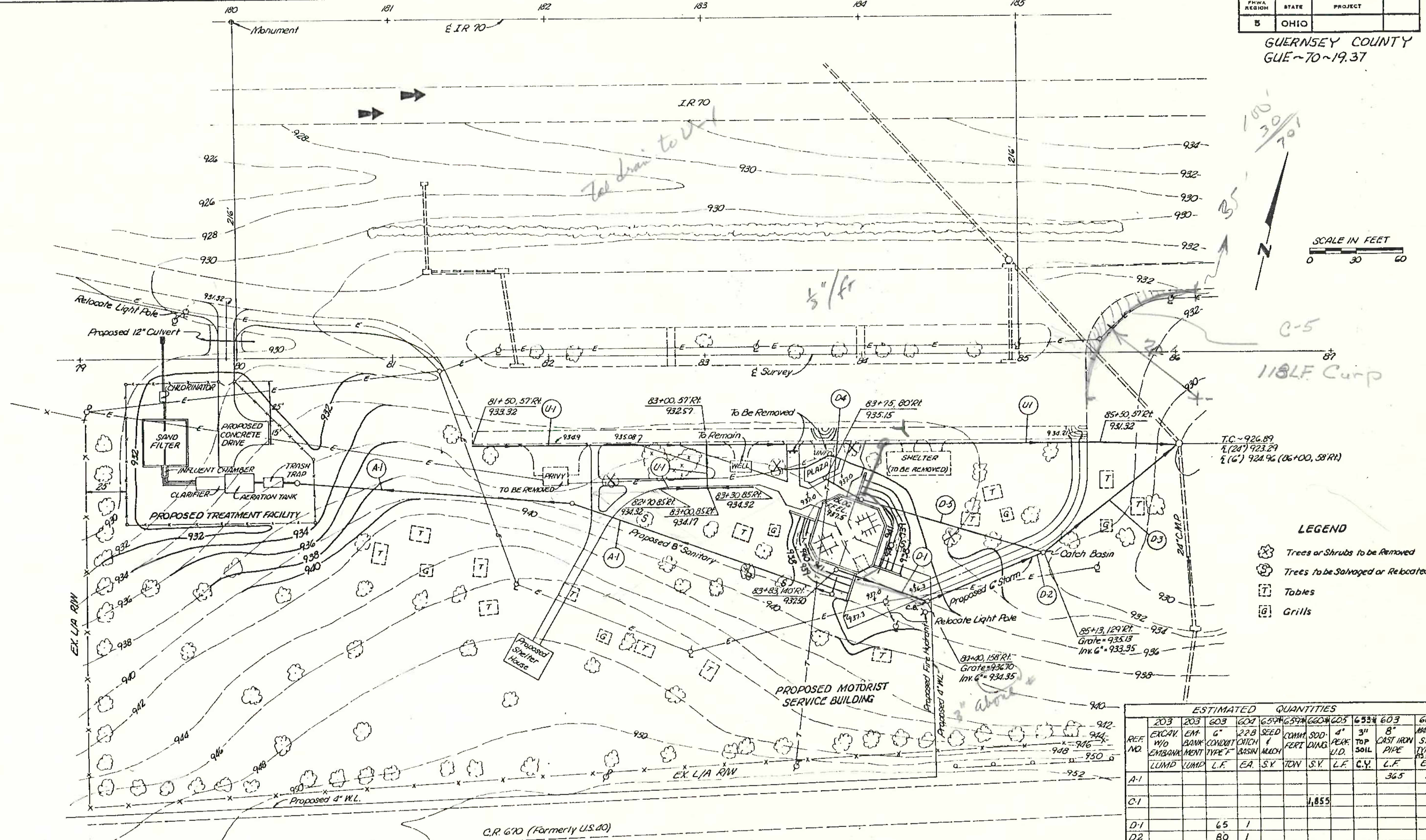
REF NO.		608 6" CONC. WALK* S.F.	608 6" CONC. WALK W/PAVER S.F.	609 CURB TYPE 2-A L.F.	SPEC. 2"x4" WOOD EDGING L.F.
A-4		1432	207	39	71
Total		1432	207	39	71

* as per plan; includes aggregate base in unit bid price.

LEGEND
- Contraction Joint
- Expansion Joint
- 7" Plain Portland Cement Pavement
- 4" Concrete Walk
- Details of joints & walks see sht. No. 9

LAYOUT PLAN

GUERNSEY COUNTY
GUE~70~19.37



REF. NO.	203 EXCAV. W/O EMBANK. LUMP	203 EMBANKMENT LUMP	603 6" CONDUIT TYPE "F" L.F.	604 2-2B CATCH BASIN EA.	659* SEED & MULCH S.Y.	659* COMM. FERT. TON	660* SODDING S.Y.	605 4" PERF. U.D. L.F.	653* 3" TOP SOIL C.Y.	603 8" CAST IRON PIPE L.F.	604** MANHOLE STD. TYPE 3 AS PER PLAN EA.
A-1										365	3
C-1							1,855				
D-1			65	1							
D2			80	1							
D3			115								
D4			30								
D5			120								
M1					2676						
S1						0.41			378		
U-1								540			
Total	LUMP	LUMP	410	2	2676	0.41	1,855	540	378	365	3

Table title: ESTIMATED QUANTITIES

* Seeding, sodding & Topsoil furnished and placed as directed by Engr. (See note on sheet No. 4) Rev. 12-13-84

** Standard No. 3 Manhole, With Flat Slab Top, As Per Plan
For manhole adjustment use precast or cast in place reinforced concrete grade rings. Manhole lids are to be solid with machined surface seats.

COLUMBUS ENGINEERING CONSULTANTS, LTD.

GRADING PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

14
66

GUERNSEY COUNTY
GUE-70-19.57

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
VB	9	Viburnum Burkwoodi	Burkwood Viburnum	30"-36"	B & B (12")
CR	48	Cotoneaster Damneri "Coral Beauty"	Coral Beauty Cotoneaster	15-18"	No. 2 Container
JC	16	Juniperus Chinensis "Sea Green"	Sea Green Juniper	18"-24"	No. 3 Container
AR	5	Acer Rubrum "Autumn Flame"	Autumn Flame Red Maple	2"-2½" Cal.	B & B (28")
FA	5	Fraxinus Americana "Autumn Purple"	Autumn Purple White Ash	2"-2½" Cal	B & B (28")
MS	4	Malus Sargentii "White Angel"	White Angel Flowering Crabapple	1"-1½" Cal.	B & B (20")
PA	7	Picea abies	Norway Spruce	5'-6'	B & B (22")
B	23		Decorative Boulders	700 LBS.	(See note Sht 3)
AS	32	Alyssum Saxtile "C.P.T.M."	Basket of Gold-Yellow	2 Yr.	4" Pots
HS	104	Hemerocallis species	Day Lily (Red & Yellow colors)	2 Yr.	Clumps or 4" Pots
RG	32	Rudbeckia fulgida 'Goldsturm'	Goldsturm Coneflower	2 Yr.	4" Pots
SS	18	Stachys byzantina	Lamb's Ear	2 Yr.	4" Pots
▭	3		Wood Bench	72" x 18"	(See shts. 2 & 9)
(S)	5	ITEM 664	Planting Salvaged Plants	3"-5" Cal.	B&B 54"
CW	3	Crataegus viridis 'Winterking'	Winterking Hawthorn	2"-2½" Cal.	B&B 28"
▨	2,250	Vinca minor	Periwinkle	1 Yr. Bundle	Flats
✲	4	Taxus media densaformis	Dense Yew	24"-30"	B&B 14"
MZ	5	Malus zumi calocarpa	Redbud Fl. Crabapple	1"-1½"	B&B 20"
PM	5	Pseudotsuga menziesii	Douglas Fir	5'-6'	B&B 22"
RF	12	Rosa 'The Fairy'	Fairy Rose	No. 1	Potted

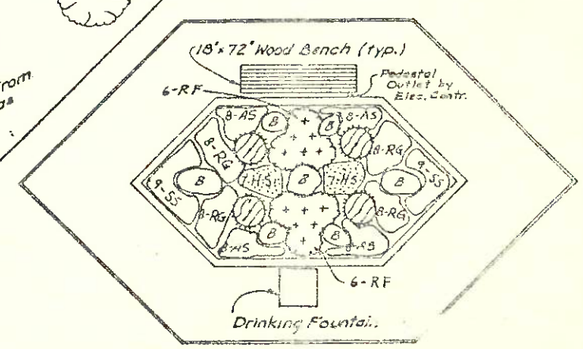
84 + ℄ SURVEY 7 + 85

SCALE IN FEET
0 10 20

N

NOTE:
The Motorists Service Building will be landscaped as per the Architect's Original Plan.
(See Sheet 50)

350 Vinca 6"O.C.
450 Vinca 6"O.C.
550 Vinca 6"O.C.
400 Vinca 6"O.C.
200 Vinca 6"O.C.
300 Vinca 6"O.C.
Pedestal Outlet by Elect. Contr.
Floodlt Wallights (4)
18" Wood Bench
Naturalized Plantings See Detail Below
Drinking Fountain
Existing Wall Shelter
4" Ash-B
4" Ash-A
3" Maple
3" Maple moved from Utility Corridor Area
Existing Table Slab
3½" Maple
Existing Trees
3½" Maple moved from Utility Corridor Area
PROPOSED MOTORISTS SERVICES BUILDING
Limits of Architects Landscape Quantities (See sheet 50)
Three 4" Ash Trees moved from various Construction Areas



NATURALIZED PLANTING DETAIL
Scale: 1" = 4'-0"

Rev. 6-29-84 HWB

LANDSCAPE PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

14A
66

GUERNSEY COUNTY
GUE-70-19.37

SCALE IN FEET
0 20 40

N

See Sheet No. 16 for Landscaping of Sewage Treatment Plant

Existing Truck Parking

Existing Auto Parking

Existing Bulletin Board

Existing Curb to Remain in Place

Existing Well Shelter

Existing Picnic Shelter

Existing Information Shelter

PROPOSED MOTORISTS SERVICE BUILDING

PROPOSED SHELTER HOUSE

See Sheet No. 14 for Landscaping around Motorist Services Building

C.R. 670 (Formerly U.S. 40)

QTY.	BOT. NAME ~ COM. NAME	SIZE	COND.
4	Malus 'Wh. Angel' - Wh. Angel Crab.	1"-1½" Cal.	B&B 20"
3	Malus zumi cal. - Redbud Crab.	1"-1½" Cal.	B&B 20"
9	Acer r. 'Aut. Flm.' - Aut. Flm. Red Maple	2"-2½" Cal.	B&B 28"
9	Frax. am. 'Aut. Pur.' - Aut. Pur. Wh. Ash	2"-2½" Cal.	B&B 28"
15	Picea abies - Norway Spruce	5'-6'	B&B 22"
15	Pseudo. menziesii - Douglas Fir	5'-6'	B&B 22"

LEGEND

- Trees/Shrubs to be removed
- Trees to be salvaged or relocated
- Existing Plant Material
- Existing Buildings to be removed
- Sidewalks & Curbs to be removed
- Existing Picnic Table & Grill / to be Removed
- Proposed Picnic Table & Grill as per Std. Dwgs. LA-10 & LA-13
- Waste Receptacle Sleeve w/Slab as per Std. Dwgs. LA-14
- Existing Light Pole
- Proposed Wood Bench
- Areas to be protected by Snow Fence, as per General Notes.

6-

FHWA REGION	STATE	PROJECT	
5	OHIO		

15/66

GUERNSEY COUNTY
GUE-70-19.37

N

SCALE IN FEET
0 20 40

4" STEEL PIPE SLEEVE AS PER 713.04. INSTALL PRIOR TO INSTALLING CONCRETE DRIVE.

2-No.4-1½" Conduit (Existing)

4" COND. JACKED UNDER PAVEMENT.

New Pull Box

2-No.8-1½" Conduit (Existing)

2-No.2-2" Conduit (Existing)

(New ATB 34.2)

CIR."C" MH #3

175'-8" Sanitary Sewer Line

San. S.M.H. #2

2-No.10-1" Conduit (Existing)

Location of Pedestal Outlet by Electrical Contractor

To Be Removed

1" Drinking Fountain Jug Filler & Hydrant (See Detail GE-03 on Sheet No. 56)

175'-8" Sanitary Sewer Line

15'-8" Sanitary Sewer Line

San. M.H. #1

2" Type "K" Hard Copper Tubing

Electric Meter

Start 2" Type "K" Water Line

(Abandon Existing 1½" Telephone Conduit)

PE

P.R.O.R. 4" Water Line (see detail sheet 43)

To meter pit

3'± deep

C.R. 670
(Formerly U.S. 40)

L/A

NOTE: SEE SHEETS 15C & 15D FOR QUANTITIES.

△- Flush box hydrant with Watts No. 8 vacuum breaker & key. Murdock Cat. No. V417-3/4" bronze box and lid, with brass pipe, 4 ft. bury, anti-freezing. Approved equal by Wade, Josam or Zurn.

Note: Duct cable as per Item 713.03 shall be used for Ramp and Area Lighting unless noted otherwise on plans. Conductors for Ramp and Area Lighting shall be Type RHH/RHW USE, 5,000 Volt as per Item 713.02.

LEGEND

—PE— Primary Electric
——— Secondary Electric
-E—E- Existing Electric
—T—T- Existing Telephone
Existing Phone Booth
Proposed Phone Booth
Pull Box Electric
Pull Box Telephone
Transformer (pad mount)
Hose Bibb (¾" Frost-Proof Hydrant w/Vacuum Breaker
Proposed Manhole
Existing Termination Pole
Light Pole
Flagpole w/lights (4)
△ Flush Box Hydrant (See note this sht.)

Rev. 12-13-89

UTILITIES PLAN

UTILITIES NOTES

(1) EXISTING ELECTRICAL SERVICE DROP POLE AND METER LOCATION. THIS EXISTING SERVICE POLE SHALL BE REMOVED BY THE ELECTRICAL CONTRACTOR AND RETURNED TO O.D.O.T. FOR FUTURE USE. THE GUERNSEY-MUSKINGUM ELECTRICAL CO-OP SHALL REMOVE THEIR MATERIAL AND EQUIPMENT FROM THIS POLE AS REQUIRED. THE EXISTING FUSED DISCONNECT SWITCH SHALL ALSO BE RETURNED TO O.D.O.T. (ORIGINALLY FURNISHED BY ODOT)

(2) PROPOSED GUERNSEY-MUSKINGUM ELECTRICAL CO-OP SERVICE POLE. GUERNSEY-MUSKINGUM ELECTRICAL CO-OP SHALL BRING PRIMARY 7200 VOLT SERVICE OVERHEAD TO THIS POLE AND INSTALL SERVICE DROP CONDUCTORS, GROUNDING ROD AND ALL OTHER APPERTENANCES, AS REQUIRED TO PROVIDE SINGLE PHASE SERVICE WITH CONCENTRIC NEUTRAL TO THE UNDERGROUND CONDUIT WHICH SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

(3) a) TWO (2) 4" CONDUITS AS PER 713.04 (ONE FOR PRIMARY SERVICE CONDUCTORS AND ONE FOR SPARE PRIMARY SERVICE FEED FROM GUERNSEY-MUSKINGUM CO-OP SERVICE POLE TO PAD MOUNTED TRANSFORMER) SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR, ALSO FURNISH AND INSTALL NO. 10 PULL WIRE IN EACH 4" CONDUIT.

b) THE GUERNSEY-MUSKINGUM ELECTRICAL CO-OP SHALL FURNISH AND INSTALL THE 7200 VOLT PRIMARY ELECTRICAL SERVICE CONDUCTOR WITH CONCENTRIC NEUTRAL, UNDER-GROUND IN (1) 4" CONDUIT TO THE PAD-MOUNTED TRANSFORMER AS SHOWN ON PLANS.

c) THE 42" X 42" X 4" HIGH CONCRETE TRANSFORMER PAD SHALL BE FURNISHED AND INSTALLED BY THE GUERNSEY MUSKINGUM-ELECTRICAL CO-OP.

d) THE GUERNSEY-MUSKINGUM ELECTRICAL CO-OP SHALL FURNISH AND INSTALL A 100 KVA PAD MOUNTED TRANSFORMER AS SHOWN ON THE PLANS AND MAKE ALL CONNECTIONS THERE IN, RELATING TO THE PRIMARY AND SECONDARY ELECTRICAL SERVICE CONNECTION, INCLUDING THE FURNISHING AND INSTALLING OF THE GROUND ROD, GROUNDING CABLE AND CONNECTORS, AND ALL CONNECTING DEVICES REQUIRED ON THE PRIMARY SIDE OF THE TRANSFORMER. TRANSFORMER INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF ARTICLE 450 OF THE NATIONAL ELECTRIC CODE (NEC). THE TRANSFORMER SHALL BE 100 KVA AND SHALL PROVIDE 400 AMPERE, 120/240 VOLTS, 1-PHASE, 60 HZ., 3-WIRE, SECONDARY ELECTRICAL SERVICE.

(4) ONE 2" CONDUIT AS PER 713.04 WITH NO. 10 PULL WIRE. (TELEPHONE)

(5) SAME AS 4.

(6) SAME AS 4.

(7) a) THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL (2) TWO 3" CONDUITS AS PER 713.04, ONE SHALL BE USED FOR THE SECONDARY ELECTRICAL SERVICE AND THE OTHER SHALL BE FOR SPARE SECONDARY ELECTRICAL SERVICE WITH NO. 10 PULL WIRE. (FROM TRANSFORMER PAD TO METER SOCKET LUGS ON EXTERIOR WALL OF BUILDING, AS SHOWN ON PLANS.)

b) THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL 3 - 500 MCM, TYPE USE RHH/RHW, 600 V. CONDUCTORS IN THE ONE 3" CONDUIT USED FOR THE SECONDARY ELECTRICAL SERVICE AND PROVIDE PROPER CABLE TERMINAL LUGS, PER GUERNSEY-MUSKINGUM ELECTRICAL CO-OP SPECIFICATIONS, ON THE CONDUCTORS TO PROVIDE THEM THE MEANS FOR MAKING THE PROPER CONNECTIONS OF THE SECONDARY ELECTRICAL SERVICE CONDUCTORS TO THEIR TRANSFORMER TERMINALS AND METER SOCKET LUGS, WHICH IS MOUNTED ON EXTERIOR WALL OF BUILDING. (FROM PAD MOUNTED TRANSFORMER TO METER SOCKET AS SHOWN ON PLANS.)

c) FROM THE METER SOCKET MOUNTED ON EXTERIOR OF BUILDING WALL, THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL (2) TWO 3" CONDUITS AS PER 713.04, ONE FOR SECONDARY ELECTRICAL SERVICE AND THE OTHER SHALL BE FOR SPARE SECONDARY ELECTRICAL SERVICE. (FROM METER SOCKET TO PANEL "P" AS SHOWN ON PLANS).

d) THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL 3 - 500 MCM, TYPE USE RHH/RHW, 600 V. CONDUCTORS IN THE 3" CONDUIT USED FOR SECONDARY ELECTRICAL SERVICE AND NO. 10 PULL WIRE IN THE 3" CONDUIT TO BE USED FOR SPARE SECONDARY ELECTRICAL SERVICE. (FROM METER SOCKET TO PANEL "P" AS SHOWN ON DRAWINGS) PROVIDE PROPER TERMINAL LUGS ON THE CONDUCTORS, ON METER SOCKET SIDE OF SECONDARY SERVICE, PER GUERNSEY-MUSKINGUM ELECTRICAL CO-OP SPECIFICATIONS. ON THE BUILDING SIDE OF THIS ELECTRICAL SERVICE PROVIDE PROPER TERMINAL LUGS FOR ELECTRICAL CONTRACTORS CONNECTION OF SECONDARY ELECTRICAL SERVICE TO ALL SAFETY DEVISES AND PANEL AS SHOWN ON PLANS OR AS REQUIRED.

e) 1.) THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A CONTINUOUS EQUIPMENT GROUND FROM PANEL "P" TO THE EXTERIOR OF THE BUILDING, CONNECTING TO ALL SAFETY DISCONNECT SWITCHES, PANELS, CONDUIT, C/T CABINET IN BUILDING, AND OTHER DEVICES, AS REQUIRED, PER (NEC).

2.) ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ONE 1 1/2" CONDUIT AS PER 713.04 WITH ONE NO. "0" AWG, TYPE USE RHH/RHW, 600 V. CONDUCTOR (GREEN) FOR THE GROUND WIRE. STUB CONDUIT 8" ABOVE FINISHED FLOOR, INSIDE BUILDING, ADJACENT TO INCOMING SECONDARY ELECTRICAL SERVICE, BELOW 400 AMP. FUSED DISCONNECT SWITCH AND EXTEND OUTSIDE BUILDING TO EXACT LOCATION OF METER SOCKET MOUNTING AREA, THERE CONDUIT SHALL TURN UP AND EXTEND 8" ABOVE FINISHED 7" CONCRETE PAVEMENT. AT METER SOCKET LOCATION THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A GROUND ROD AS PER 625.10 AND 713.16, IN ADDITION TO THESE REQUIREMENTS, BONDING GROUND CONNECTIONS SHALL BE FURNISHED AND INSTALLED ON EACH END OF THE CONDUIT AS PER ARTICLE 250 OF THE (NEC). GROUND CONDUCTOR AND CONNECTIONS SHALL BE VISIBLE TO THE ELECTRICAL INSPECTOR FOR HIS INSPECTION AND APPROVAL.

f) THE GUERNSEY-MUSKINGUM ELECTRICAL CO-OP SHALL FURNISH A 400 AMPERE CURRENT METER SOCKET ENCLOSURE FOR EXTERIOR INSTALLATION, WITH METER. THE 400 AMP. METER SOCKET ENCLOSURE WILL BE FURNISHED TO THE ELCETRICAL CONTRACTOR AND HE SHALL BE RESPONSIBLE FOR THE INSTALLATION OF SAID INCLOSURE. MOUNT CENTER LINE OF METER 5' -0" OFF OF FINISHED PAVEMENT.

g) THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL LIGHTNING ARRESTORS ON THE INCOMING SECONDARY ELECTRICAL SERVICE AS PER 625.18 AND AS SHOWN ON STANDARD CONSTRUCTION DRAWING HL-15.

(8) EXISTING UNDERGROUND SECONDARY ELECTRICAL SERVICE SHALL BE ABANDON OR REMOVED, AS REQUIRED, BY THE ELECTRICAL CONTRACTOR.

(9) EXISTING UNDERGROUND TELEPHONE SERVICE SHALL BE ABANDON OR REMOVED, AS REQUIRED, BY THE ELECTRICAL CONTRACTOR.

(10) WESTERN RESERVE TELEPHONE COMPANY'S EXISTING TELEPHONE SERVICE POLE. THE WESTERN RESERVE TELEPHONE COMPANY SHALL INSTALL (20 PAIR) SERVICE DROP CONDUCTORS, AS REQUIRED, TO THE 2" UNDERGROUND CONDUIT FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR, AND CONTINUE SAID TELEPHONE SERVICE UNDERGROUND TO BUILDING AND EXTERIOR TELEPHONE BOOTHS AS REQUIRED AND AS SHOWN ON PLANS.

(11) ONE 2" CONDUIT AS PER 713.04 WITH NO. 10 PULL WIRE. (TELEPHONE). ABANDON OR REMOVE EXISTING 1 1/2" TELEPHONE CONDUIT AS REQUIRED AND INSTALL THE NEW 2" CONDUIT ADJACENT TO ONE IN THE SAME TRENCH AREA.

(12) SAME AS 4.

(13) a) SAME AS 4.

b) ONE 3" CONDUIT AS PER 713.04 WITH 3 - No. 4/0 TYPE USE RHH/RHW, 600V. CONDUCTORS (TO SEWAGE TREATMENT PLANT), ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2 ACTIVE, 2 SPARE).

(14) ONE 3" CONDUIT AS PER 713.04 WITH 9 -1/C NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02. (RAMP AND AREA LIGHTS CIR'S "A", "B" AND "C").

(15) ONE 3" CONDUIT AS PER 713.04 WITH 6 - 1/C No. 4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02 (RAMP AND AREA LIGHTS, CIR'S "A" AND "D").

(16) ONE 2" CONDUIT, AS PER 713.04 WITH 3-1/C No. 4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02 (RAMP AND AREA LIGHTS, CIR. "D".)

(17) a) ONE 3" CONDUIT AS PER 713.04 WITH 3 - NO. 4/0 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS (TO SEWAGE TREATMENT PLANT), ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2 ACTIVE, 2 SPARE).

b) ONE 3" CONDUIT AS PER 713.04 WITH 12-1/C NO 4 AWG U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02 (RAMP AND AREA LIGHTS, CIR'S "A", "B", "C" AND "D".)

(18) a) ONE 2" CONDUIT AS PER 713.04 WITH NO. 10 PULL WIRE (TELEPHONE).

b) ONE 3" CONDUIT AS PER 713.04 WITH 12-1/C-NO. 4 AWG, U.L. TYPE MV-90 DRY 5000V. CONDUCTORS AS PER 713.02 (RAMP AND AREA LIGHTS, CIR'S "A", "B", "C" AND "D".)

c) ONE 3" CONDUIT AS PER 713.04 WITH 3 - NO 4/0 AWG, TYPE USE RHH/RHW, 600 V. CONDUCTORS (TO SEWAGE TREATMENT PLANT), ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2 ACTIVE, 2 SPARE).

d) ONE 1 1/2 TYPE "K" COPPER WATER LINE (TO SEWAGE TREATMENT PLANT).

(19) ONE 3" CONDUIT AS PER 713.04 WITH 3-NO. 4/0 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS (TO SEWAGE TREATMENT PLANT), ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2 ACTIVE, 2 SPARE).

(20) ONE 3" CONDUIT AS PER 713.04 WITH 12-1/C NO. 4 AWG, U.L. TYPE MV - 90 DRY, 5000V. CONDUCTORS AS PER 713.02 (TO RAMP AND AREA LIGHTS, CIR'S "A", "B", "C" AND "D")

(21) SAME AS 19.

(22) a) ONE 2" CONDUIT AS PER 713.04 WITH NO. 10 PULL WIRE (TELEPHONE).

b) ONE 3" CONDUIT AS PER 713.04 WITH 3 - NO. 4/0 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS (TO SEWAGE TREATMENT PLANT), ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2 ACTIVE, 2 SPARE).

c) ONE 1 1/2" TYPE "K" COPPER WATER LINE (TO SEWAGE TREATMENT PLANT).

(23) ONE 2" CONDUIT AS PER 713.04 WITH 3-1/C No. 4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02 (WIRE FOR 120 VOLT, 1-PHASE, 60 HZ., USE ONE WIRE FOR EQUIPMENT GROUND. USE CABLE SPLICING KITS AS PER 713.15(5) AND SPLICE INTO CIR. "A" FEEDERS IN PULL BOX. (TO TELEPHONE BOOTHS AND WELL SHELTER)

(24) a) ONE 2" CONDUIT AS PER 713.04 WITH 3-1/C NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02 (WIRE FOR 120V., 1-PHASE, 60 HZ., USE ONE WIRE FOR EQUIPMENT GROUND. (TO TELEPHONE BOOTHS AND WELL SHELTER)

b) ONE 2" CONDUIT AS PER 713.04 WITH NO. 10 PULL WIRE (TELEPHONE)

(25) ONE 2" CONDUIT AS PER 713.04 WITH NO. 10 PULL WIRE (TELEPHONE).

(26) ONE 2" CONDUIT AS PER 713.04 WITH 3-1/C No.4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL (3) CABLE SPLICING KITS AS PER 713.15(5) AND PROVIDE 30 LIN. FT. SPLICING SLACK PERMIT THE TELEPHONE CO. TO MAKE CONNECTIONS TO 120 VOLT LIGHTS IN TELEPHONE BOOTHS.

(27) ONE 2" CONDUIT AS PER 713.04 WITH 3-1/C NO 4 AWG, U.L. TYPE MV-90 Dry 5000V CONDUCTORS AS PER 713.02 (WIRE FOR 120V., 1-PHASE, 60 HZ, USE ONE WIRE FOR EQUIPMENT GROUND. (TO LIGHT IN WELL SHELTER)

(28) SAME AS 25.

(29) SAME AS 25.

(30) ONE 1 1/2" TYPE "K" COPPER WATER LINE (TO SEWAGE TREATMENT PLANT).

(31) a) ONE 3" CONDUIT AS PER 713.04 WITH 3-NO. 4/0 AWG, TYPE USE RHH/RHW, 600 V. CONDUCTORS (TO SEWAGE TREATMENT PLANT), ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2-ACTIVE, 2 SPARE).

b) ONE 1 1/2" TYPE "K" COPPER WATER LINE (TO SEWAGE TREATMENT PLANT).

(32) ONE 3" CONDUIT AS PER 713.04 WITH 3-NO. 4/0 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS (TO SEWAGE TREATMENT PLANT), ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2 ACTIVE, 2 SPARE)

(33) SAME AS 32.

(34) SAME AS 32.

UTILITIES NOTES

(35) ONE 1 1/2" TYPE "K" COPPER WATER LINE (TO SEWAGE TREATMENT PLANT 3/4" FROST-PROOF HYDRANT W/VACUUM BREAKER).

(36) ONE 2 1/2 CONDUIT AS PER 713.04 WITH 3 - NO. 4 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS (TO DOSING PUMP CONTROL PANEL). ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL (3) CABLE SPLICING KITS AS PER 713.15 AND PROVIDE 30 LIN. FT. SPLICING LEADS TO PERMIT CONNECTION TO THE 3-NO. 4/0 CONDUCTORS IN PULL BOX, ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2 ACTIVE, 2 SPARE).

(37) ONE 2 1/2" CONDUIT AS PER 713.04 WITH 3-NO. 4/0 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS (TO MAIN BLOWER CONTROL PANEL). ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL (3) CABLE SPLICING KITS AS PER 713.15(5) AND PROVIDE 30 LIN. FT. SPLICING LEADS TO PERMIT CONNECTION TO THE 3-NO.4/0 CONDUCTORS IN PULL BOX, ALSO FURNISH AND INSTALL (3) BRUNDY QIKLUGS, FOR COPPER WIRE, OF PROPER SIZE TO CONNECT TO TERMINALS IN CONTROL PANEL.

(38) ONE 2 1/2" CONDUIT AS PER 713.04 WITH 3 - NO. 4 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS (TO FLOW EQUALIZATION CONTROL PANEL.) ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL (3) CABLE SPLICING KITS AS PER 713.15(5) AND PROVIDE 30 LIN. FT. SPLICING LEADS TO PERMIT CONNECTION TO THE 3 - NO. 4/0 CONDUCTORS IN PULL BOX, ALSO FOUR NO. 12 AWG, SIGNAL CONDUCTORS (2 ACTIVE, 2 SPARE).

(39) ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ONE NEW LIGHT POLE AND BASE, ATB 34.2, PER DRAWING HL-8 AND PER 625 AND 713.01, ALSO FURNISH AND INSTALL ONE LIGHT POLE FOUNDATION AS PER 625 AND DRAWING HL-1. LUMINAIRE, BALLAST AND LAMP SHALL MATCH EXISTING, MEETING 713 SPECIFICATIONS. FURNISH AND INSTALL CABLE CONNECTOR KITS, TYPE II, AS REQUIRED, PER 713.15(2). (CIR."C")

(40) a) ELECTRICAL CONTRACTOR SHALL REMOVE, RELOCATE AND REINSTALL EXISTING LIGHT POLE AND BASE, HE SHALL ALSO REMOVE EXISTING LIGHT POLE FOUNDATION.

b) ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ONE NEW LIGHT POLE FOUNDATION AS PER 625 AND DRAWING HL-1. (CIR."A")

(41) SAME AS 40 (CIR."C").

(42) a) ONE 1 1/4" CONDUIT AS PER 713.04 WITH 3-NO. 10 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS, WIRE FOR 120V., 1-PHASE, 60 HZ. (TWO WIRE AND GREEN GROUND WIRE BRANCH FEED CIR. P-25 FROM PANEL "P" (TO RECEPTACLE POWER PEDESTAL).

b) ONE 1 1/4" CONDUIT AS PER 713.04 WITH 3-NO. 12 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS, WIRE FOR 240 V., 1-PHASE, 60 HZ., RUN GROUND WIRE BACK TO PANEL. (BRANCH FEED CIR. B-8 FROM PANEL "B" TO P.E. CONTROLLER, TO FLAGPOLE).

(43) SAME AS 42.

(44) ONE 1 1/4" CONDUIT AS PER 713.04 WITH 3-NO. 10 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS, WIRE FOR 120V., 1-PHASE, 60 HZ. (TWO WIRE AND GREEN GROUND WIRE BRANCH FEED CIR. P-25 FROM PANEL "P" TO RECEPTACLE POWER PEDESTAL).

(45) ONE 1 1/4" CONDUIT AS PER 713.04 WITH 3-NO. 12 AWG, TYPE USE RHH/RHW, 600V. CONDUCTORS, WIRE FOR 240V., 1-PHASE, 60 HZ., RUN GROUND WIRE BACK TO PANEL. (BRANCH FEED CIR. B-8 FROM PANEL "B" TO P.E. CONTROLLER, TO FLAG POLE.)

(46) ONE 1" TYPE "K" WATER LINE (TO EXTERIOR DRINKING FOUNTAIN, JUG FILLER AND 6 EXTERIOR HYDRANTS.)

(47) ONE 2" UNIT TYPE DUCT-CABLE SYSTEM AS PER 713.03 WITH 3-1/C NO. 4 AWG, TYPE USE RHH/RHW, 5000V. CONDUCTORS. (RAMP AND AREA LIGHTS, CIR. "C")

(48) ONE 2" CONDUIT AS PER 713.04 WITH 3-1/C NO. 4 AWG, U.L. TYPE MV-90DRY, 5000V. CONDUCTORS AS PER 713.02. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL (3) CABLE SPLICING KITS AS PER 713.15(5) AND SPLICE INTO CIR. "C" FEEDERS IN PULLBOX. (TO ATB 34.2 LIGHT POLE AND BASE.) CIR."C"

(49) SAME AS 48 EXCEPT ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL CONNECTOR KITS, TYPE II, AS PER 713.15 AND DRAWING HL-9. CIR"C"

(50) ONE 2" TYPE "K" COPPER WATER LINE (DOMESTIC COLD WATER SERVICE TO BUILDING FROM 4' [illegible] WATER MAIN. SEE DETAIL SHEET 43.

(51) ONE 2" UNIT DUCT-CABLE SYSTEM AS PER 713.03 WITH 3-1/C NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02. (RAMP AND AREA LIGHTS). CIR."D"

(52) THRU 60 SAME AS 51 . REMOVE EXISTING CONDUCTORS FEEDING INTO EACH EXISTING LIGHTPOLE AND EXISTING CONNECTOR KITS. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUCTORS TO EACH EXISTING LIGHTPOLE BASE (52 THRU 60) AND FURNISH AND INSTALL NEW CABLE CONNECTOR KITS TYPE II, AS REQUIRED, PER 713.15(2) AND PER DRAWING HL-9. MAKE CONNECTIONS TO EXISTING POLE AND BRACKET CABLES FEEDING THE EXISTING LUMINAIRES AND CONNECT TO GROUND CABLE AS REQUIRED. FURNISH AND INSTALL NEW GROUND CABLE CONNECTORS AS PER DRAWING HL-9. (TOTAL OF 9-LIGHTPOLES) CIR."D", TERMINATE AT LIGHTPOLE STA. 206+65.

61 THRU 63 NOT USED.

(64) a) 4" CONDUIT AS PER 713.04 (JACKED UNDER PAVEMENT).

b) IN THE 4" CONDUIT UNDER PAVEMENT, INSTALL ONE 2" UNIT TYPE DUCT-CABLE SYSTEM AS PER 713.03 WITH 3-1/C NO. 4AWG, U.L. TYPE MV-90 DRY 5000V. CONDUCTORS AS PER 713.02. (RAMP AND AREA LIGHTS) CIR."B" TO PARKING ISLAND. NOTE 65 b) SHALL ALSO APPLY HEREIN.

(65) a) ONE 2" UNIT TYPE DUCT-CABLE SYSTEM AS PER 713.03 WITH 3-1/C NO.4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02. (TO EXISTING LIGHTPOLES) CIR."B".

b) REMOVE EXISTING CONDUCTORS FEEDING INTO EACH EXISTING LIGHTPOLE AND EXISTING CONNECTOR KITS. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUCTORS TO EACH EXISTING LIGHTPOLE, POLE BASE AND FURNISH AND INSTALL NEW CABLE CONNECTOR KITS, TYPE II, AS REQUIRED, PER 713.15(2) AND DRAWING HL-9. MAKE CONNECTIONS TO EXISTING POLE AND BRACKET CABLES FEEDING THE EXISTING LUMINAIRES AND CONNECT TO GROUND CABLE AS REQUIRED. FURNISH AND INSTALL NEW GROUND CABLE CONNECTORS AS PER DRAWING HL-9.

(66) SAME AS 65 a) AND b). CIR"B"

(67) SAME AS 47 . CIR."C"

(68) THRU 73 SAME AS 52 THRU 60 EXCEPT BRANCH FEED IS CIR."C" (TOTAL OF 5-LIGHTPOLES) TERMINATE AT LIGHTPOLE STA. 169+25.

(74) ONE 3" CONDUIT AS PER 713.04 with 6-1/C NO. 4 AWG, U.L. TYPE MV-90 DRY, 5000V. CONDUCTORS AS PER 713.02 (RAMP AND AREA LIGHTS) CIR'S "B" AND "C".

UTILITY QUANTITIES SUB-SUMMARY

⊗ ITEMS AS DESCRIBED INDICATES THE ACTUAL NUMBER OF CONDUCTORS IN A PARTICULAR RUN OF CONDUIT IDENTIFIED BY BALLOON NO. ACTUAL TOTAL LIN. FEET OF REF. SIZE & TYPE OF CONDUCTORS TO BE FURNISHED SHALL BE THE TOTALS OF EACH SIZE & TYPE ADDED TOGETHER.

FED. AID DIVISION	STATE	PROJECT	
2	OHIO		

15C 66

GUERNSEY COUNTY
GUE-70-19.37

SHEET NO.

Station to Station	Side	625 REMOVE EXIST. ELEC. SERVICE POLE & DISC. SWITCH. REF. TO SDD'S	— GUERNSEY-MUSKINGUM PROVIDED SERVICE DROP WIRE	625 4" COND. AS PER 713.04	625 NO. 10 AWG, FULL WIRE	625 3½" TRENCH AS PER PLAN	SPEC. — PLASTIC CAUTION TAPE	625 2" COND. AS PER 713.04	— JOSKIN AND MTD. TRANSFORMER & PRO. BY GME MUSK. ELEC. COOP.	625 3" COND. AS PER 713.04	625 3-#2 500 MCM, TYPE USE RHW/RHH, 600 V. CONDUCTORS ⊗	625 500 MCM, TYPE USE RHW/RHH, BOX CABLE CONNECTOR LUGS.	625 400 AMP CURRENT METER SOCKET. (METERING ONLY)	625 1½" COND. AS PER 713.04	625 GROUND ROD AS PER 625.10 AND 713.16, DWG HL-7	625 1-NO. 10 AWG, TYPE USE RHW/RHH, BOX CND. GRND. ⊗	625 BONDING JUMPER CONNECTIONS PER ARTICLE 250 (NEC)	625 LIGHTING ARRESTOR AS PER 625.18	625 EXISTING UNDER-GROUND SECONDARY ELECTRIC SERVICE, REMOVE & REMOVE	625 EXISTING UNDER-GROUND TELEPHONE SERVICE, REMOVE OR ABANDON IN PLACE	— WESTER RESERVE TELEPHONE CO'S EXISTING SERVICE TO BE SAVED	625 PULL BOX, 24" DIA. AS PER 713.08	625 TRENCH AS PER PLAN	625 NO. 4/0 AWG, TYPE USE RHW/RHH, 600 V. CONDUCTORS.	625 NO. 12 AWG, SIGNAL CONDUCTORS (2-METAL, 2-SPARE) ⊗	625 3-#6, NO. 4 AWG, TYPE MV-90 DRY, 5000 V. CONDUCTORS, 713.02 ⊗	625 PULL BOX, 24" DIA. AS PER 713.08 DWG. HL-10 (ELECTRICAL	625 6-#6 NO. 4 AWG, UL TYPE MV-90 DRY, 5000 V. CONDUCTORS/PHASE	625 CABLE SPLICING KITS A PER 713.15 (5)	625 3-#6 NO. 4 AWG, UL. TYPE MV-90 DRY, 5000 V. CONDUCTORS/713.02 ⊗	605 4" SHALLOW PIPE UNDERDRAINS AS PER 605.05 DWG HL-8	625 12-#6, NO. 4 AWG, 5-#12 NO. 10 AWG, TYPE MV-90 DRY, 5000 V. CONDUCTORS/713.02 ⊗	625 2½" COND. AS PER 713.04	625 2½" COND. AS PER 713.04	625 BRANDY QUICKLUGS FOR COPPER CONDUCTORS	625 LIGHT POLE AS PER 625.05, 713.04, DWG HL-8 (12 MM)	625 LIGHT POLE FOUNDATION AS PER 625.06	625 LUMINAIRE PER NYE-54.2	625 POLE AND BRACKET CABLE, NO. 8 AWG, ALL TYPE MV-90 DRY, 5000 V.	625 REMOVE & RE-INSTALL EXISTING LIGHT POLE, INCLUDE EXISTING FOUNDATION	603 3/4" FROST-PROOF HYDRANT W/ VACUUM BREAKER (INFO. ONLY)	603 4" TRENCH AS PER PLAN (INFO. ONLY)	603 1¼" TYPE K HARD COPPER WATER LINE TO SERVICE PLANT	SEE SHEET NO.
		EA.	EA.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	L.F.	L.F.	EA.	EA.	L.F.	EA.	L.F.	EA.	EA.	LUMP	LUMP	EA.	EA.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	L.F.	L.F.	L.F.	L.F.	L.F.	EA.	EA.	EA.	EA.	L.F.	EA.	L.F.	L.F.	
		1																																								15
			1																																							15
				176	216	88	88																																		15
					25			15																15																15
					25			15																15																15
					20			10																1	10															15
					125	45	45		1	90	175	12	1	20	1	40	2	1																						15
																			LUMP																					15
																				LUMP																			15
																					1																			15
					118			98											LUMP				1	98															15
					25			15																15																15
					30	30		30		30															470	120														15
										205					2									205			2205	3			60									15
										180					2									180				2	1820	3	40									15
								145																145				1			495	20								15
						10				20															60	80		1				20	240								15
					30	20		20		40															90								360					20	20	15
						5				5															45	60														15
										10														10								360								15
						12				12															36	48														15
					40	40		40		40															120	160													40	40	15
								65																65				2	225											15
					35			70																35					105											15
					25			15															1	15						20										15
								10																10				1		3	60									15
								15																15							105									15
					20			10																10																15
					15			5															1	5							20							85	85	15
						265				265															855	1140		1				20							245	265	15
						20				20															90	120		1				20									15
						25				25															135	180		1				20									15
						35				35															165	220		1				20									15
																																						1	65	65	15
						10																			90	120			3					10							15
						25																			135				3					25	3						15
						15																			174	232			3					38							15
															1																					1	1	1	95				15
																																						1		1		15
															1																					1						15
						33																						1				20									15
						75																																				15
						35																																				15
						15																																				15
																																								20		15
						15																						1				20									15
																													3												15
						125																						1				20									15
																																								55		15
						50																																				15
						2068									9				LUMP									9				180									15
(NOT USED)																																										—
															1													1				20									15
						165									1													1				20									15
						165									1													1				20									15
						160																						1				20									15
						1036									5									150				5	510			100									15
TOTALS		1	—	176	749	4587	133	578	—	977	175	12	1	20	24	40	2	1	LUMP	LUMP	—	4	998	2085	2480	2205	33	1830	20	990	720	960	93	3	1	3	1	95	2	1	550	475+	

* INCLUDES TRENCH & HYDRANT

FED RD DIVISION	STATE	PROJECT	
2	OHIO		

15D
66

GUERNSEY COUNTY
GUE-70-19.37

UTILITY QUANTITIES SUB-SUMMARY

SHEET NO.

Station to Station	Side	625 7½" COND. AS PER 713.04 L.F.	625 NO. 10 AWG, TYPE USE RHH/RHW, 600 V. CONDUCTORS L.F.	625 NO. 12 AWG, TYPE USE RHH/RHW, 600 V. CONDUCTORS L.F.	625 WIRING FIXTURES & LIGHT FIXTURES AS PER PLANS EA.	625 FURNISHING & INSTALLING RECEPTACLES POWER PEDESTAL EA.	625 2 "DUCT CABLE W/ 3-#6 NO. 4 AWG, ULTYPE RHW-90 DRY, SEU, 3 #2 AWG, 1 #6 AWG L.F.	625 CONNECTOR KIT, TYPE II, AS PER 713.15 (2), DWG. H2-1 EA.	625 REMOVE EXISTING CONNECTOR KIT & TWO LIGHT POLES, EACH EA.	625 REMOVE EXISTING LIGHTING LUMINAIRES & EXISTING LIGHT POLES EA.	625 4" STEEL CONDUIT AS PER 713.04, JACKED UNDER PAVEMENT L.F.	625 4" STEEL CONDUIT SLEEVE AS PER 713.04, MONO. CONCRETE ENCASED DUCT BANK L.F.	SPEC. Motorist's Serv. Building (Electrical only) EA.	SPEC. Comp. Waste Treatment Sys. (Electrical only) EA.	SPEC. Motorist's Serv. Building (Plumbing only) EA.	SPEC. Motorists Serv. Building (Heat. & Vent. only) EA.	839 High Voltage Test LUMP	603 2" TYPE "K" HARD COPPER WATER LINES COLD WATER SERVICE TO BLDG. L.F.	603 FURNISH INSTALL, CUT, FILL & TEST HYDRANTS, EA LUMP	603 1" TYPE "K" HARD COPPER WATER LINE TO P.I., INCL. FITTINGS L.F.	SEE SHEET NO.
		70	165	165																	15
		150	255	255																	15
		35	135			1															15
		15		75	1														LUMP	260	15
							25														15
							25														15
							135											60			15
							70														15
							2230	18	18	9											15
(NOT USED)							50	2	2	1	30										15
							185	2	2	1											15
							185	2	2	1											15
							180					30									15
							1150	10	10	5											
Motorists Services Bldg.													1		1	1					
Waste Treatment System (See Supplemental Spec. 839)														1			LUMP				
								4	4	2											15
								4	4	2											15
								2	2	1											15
								2	2	1											15
TOTALS		270	555	495	1	1	4235	46	46	23	30	30	1	1	1	1	LUMP	60	LUMP	260	

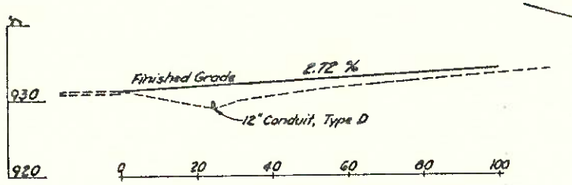
FHWA REGION	STATE	PROJECT	
5	OHIO		

16
65

GUERNSEY COUNTY
GUE.-70-19.37

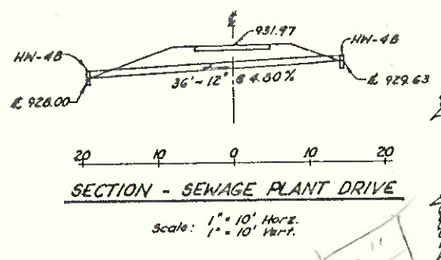
REF NO.	203 EXCAV. W/O EMBANK. LUMP	203 EMBANKMENT LUMP	304 AGGRE. BASE C.Y.	452 7" PLAIN PTLD. CMT. CONC. PVT. S.Y.	601 ROCK CHNL. TYPE B W/FILTER C.Y.	602 CONCRETE MASONRY HW-4B C.Y.	603 6" CONDUIT TYPE B L.F.	603 12" CONDUIT TYPE D* L.F.	607 FENCE TYPE CL L.F.	607 GATE TYPE CL EA.	SPEC. COMPLETE WASTE TREATMENT SYSTEM EA.
W-1											1
D-1						0.40		36			
D-2					0.67	0.20	30				
F-1									70		
F-2									40		
F-3									120		
F-4									90		
F-5									60		
G-1										1	
P-1			40	241							
P-2				159							
Total	Lump	Lump	40	400	1	0.60	30	36	380	1	1

EY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
R	30	CORNUS RACEMOSA	GRAY DOGWOOD	2'-3'	No. 3 CONTAINER
JC	31	JUNIPERUS CHINENSIS "SEA GREEN"	SEA GREEN JUNIPER	18"-24"	No. 3 CONTAINER
PN	9	PINUS NIGRA	AUSTRIAN PINE	5'-6'	B & B 22"
PM	3	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	5'-6'	B & B 22"
S	51	RHUS AROMATICA	FRAGRANT SUMAC	2'-3'	No. 3 CONTAINER



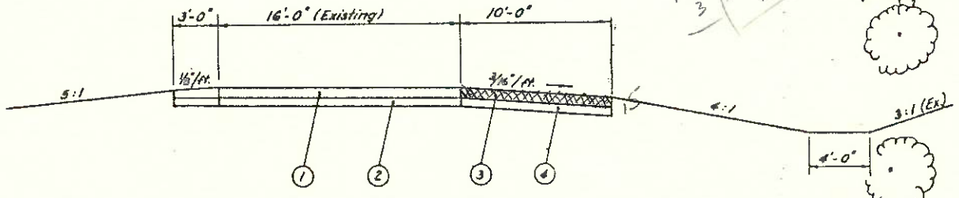
PARTIAL PROFILE - SEWAGE PLANT DRIVE

Scale: 1" = 20' Horz.
1" = 10' Vert.



SECTION - SEWAGE PLANT DRIVE

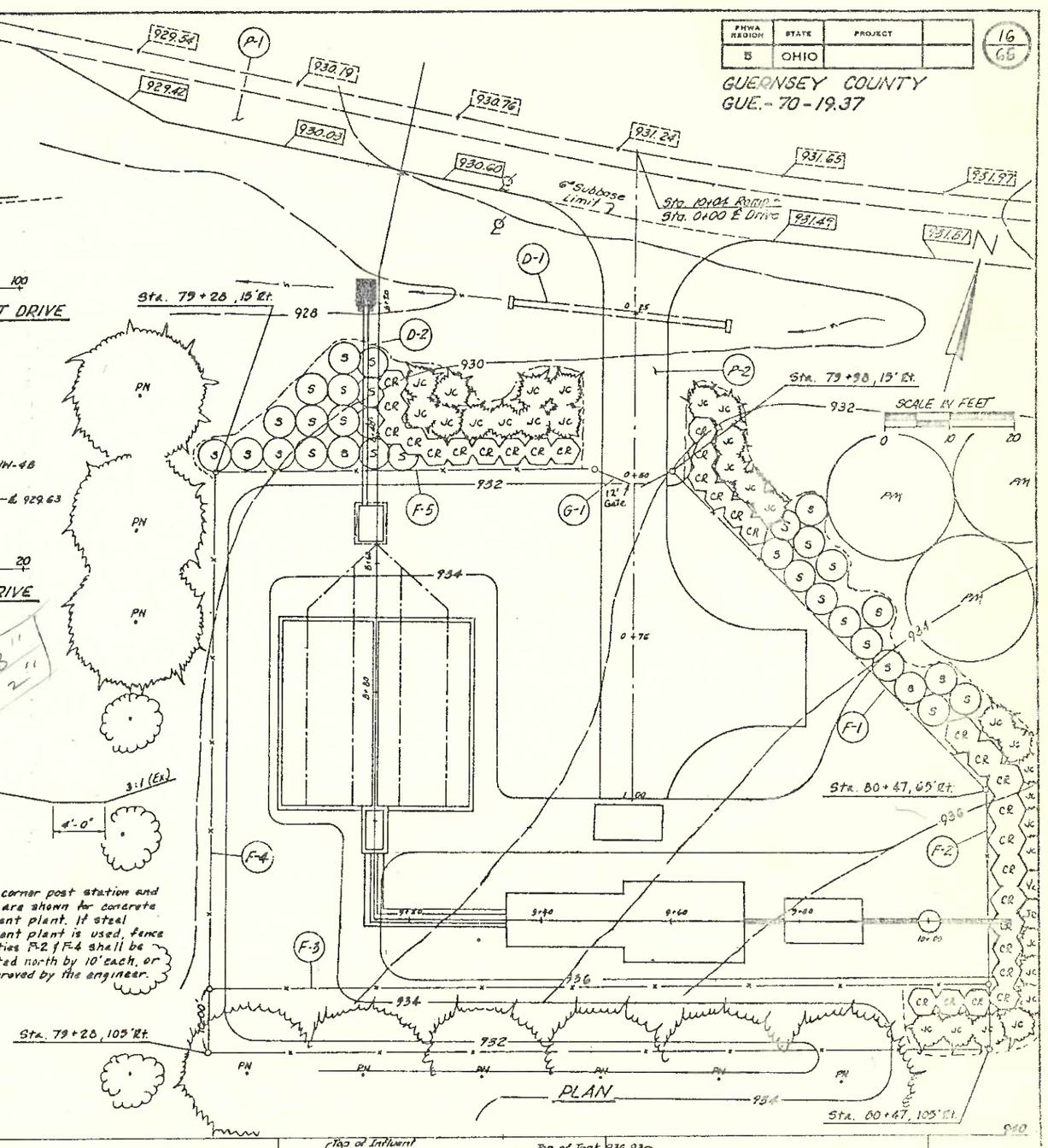
Scale: 1" = 10' Horz.
1" = 10' Vert.



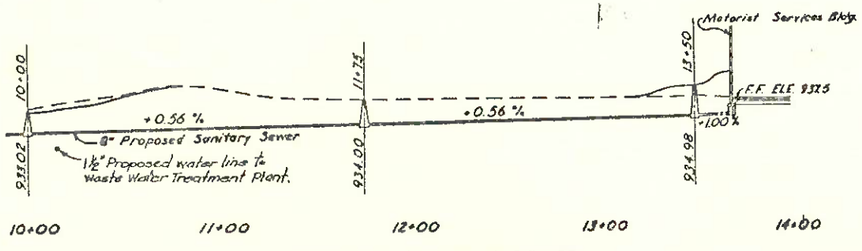
1. 9" Reinforced Portland Cement Concrete Pavement
2. 6" Subbase, Grading "A" or "B", modified as per plan
3. 452 - 7" Plain Portland Cement Concrete Pavement
4. 304 - Aggregate Base (6")

Note: Fence corner post station and offset are shown for concrete treatment plant. If steel treatment plant is used, fence quantities F-2 & F-4 shall be relocated north by 10' each, or as approved by the engineer.

TYPICAL SECTION - STORAGE LANE

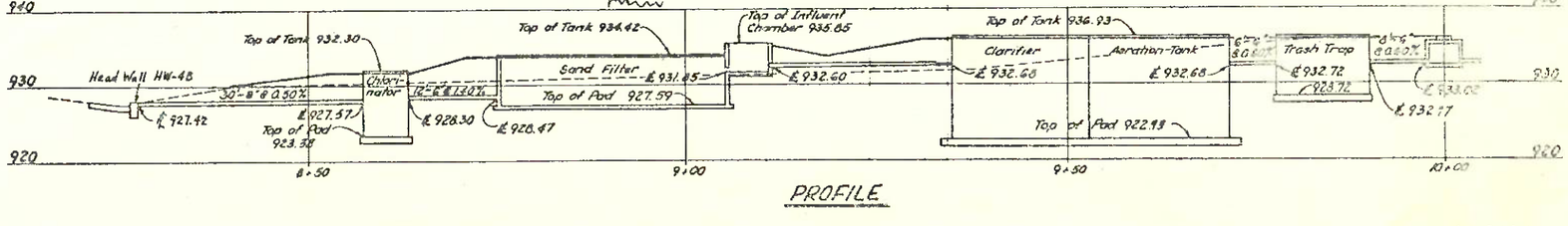


PLAN



PROFILE - SANITARY SEWER

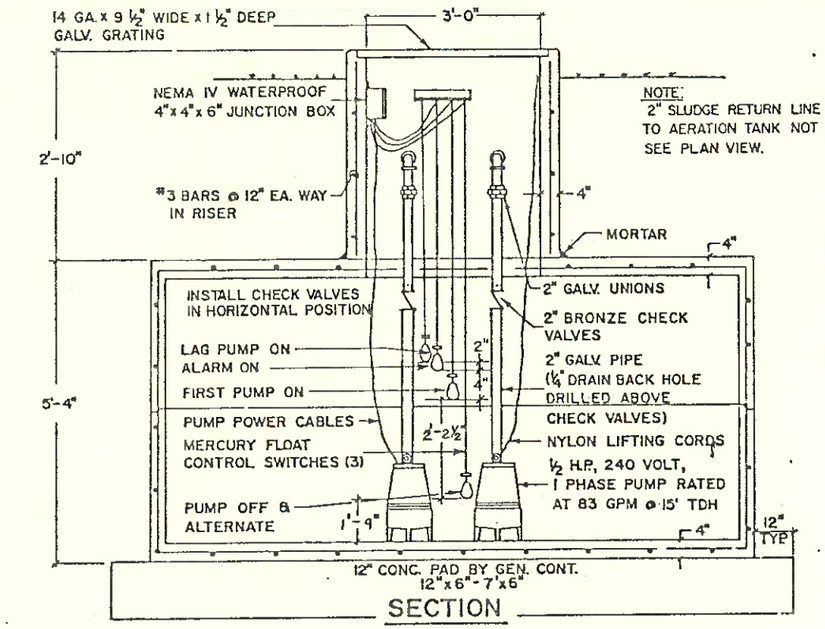
Scale: 1" = 40' Horz.
1" = 10' Vert.

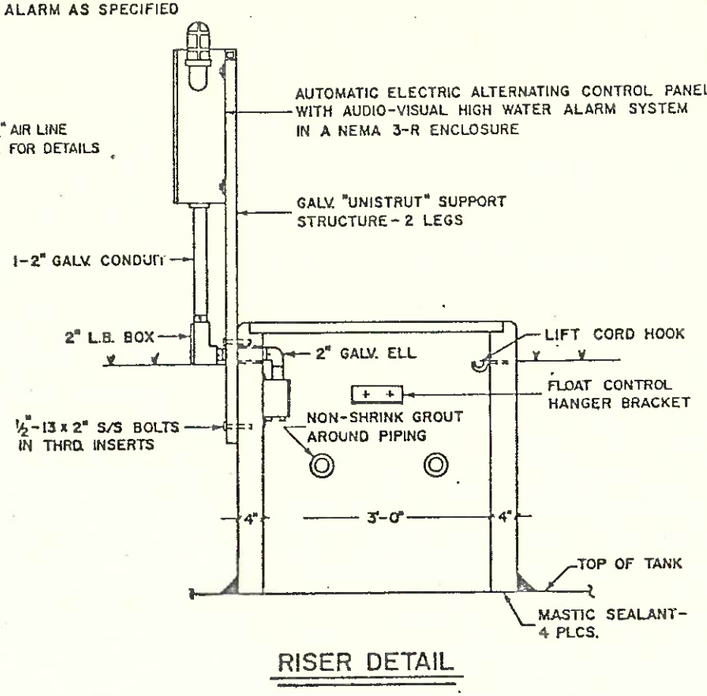


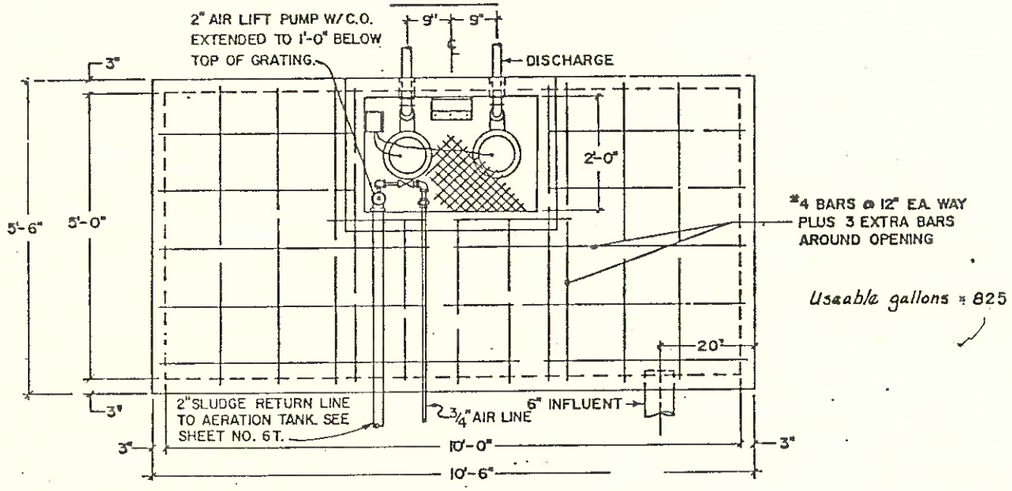
PROFILE

Rev. 9-26-69

SEWAGE TREATMENT PLANT
PLAN AND PROFILES



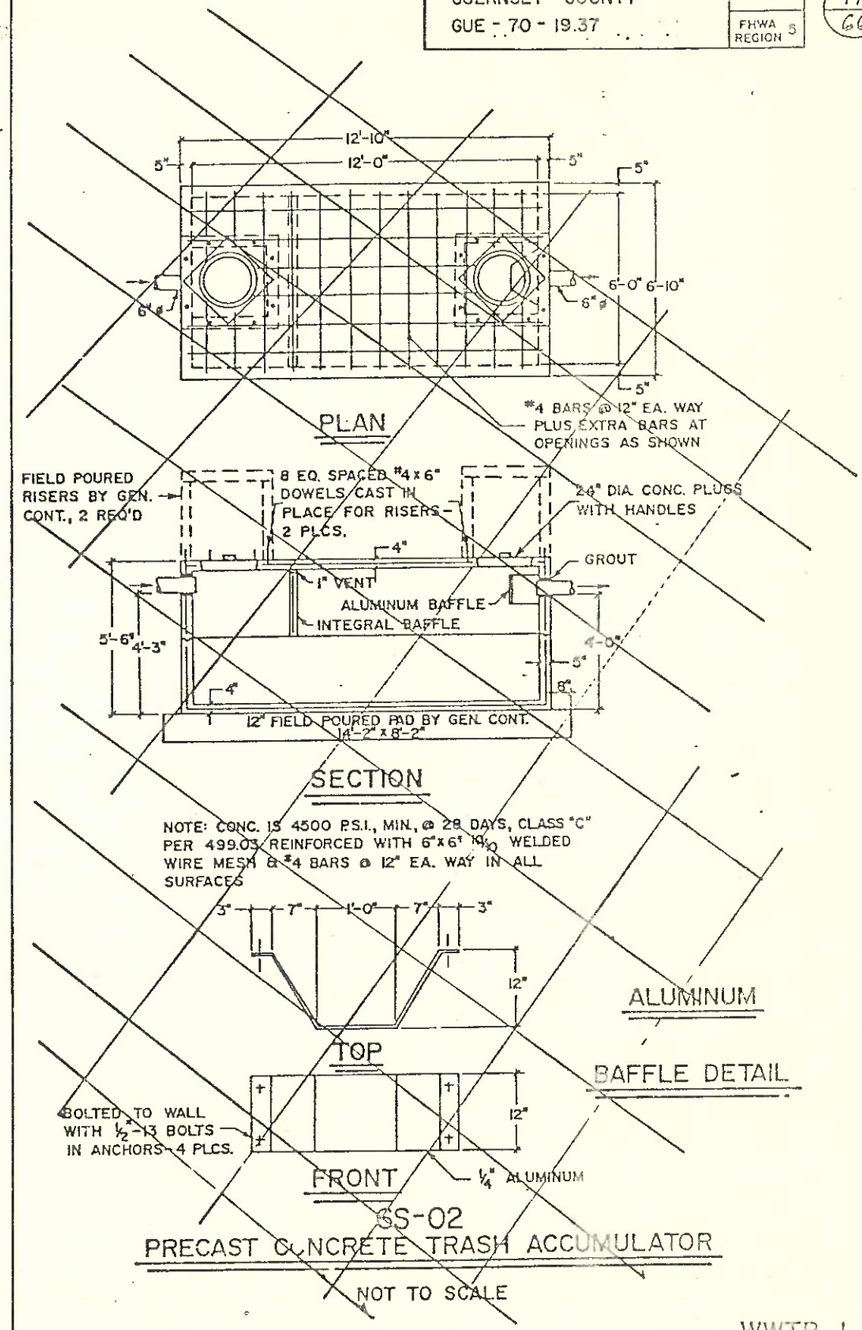




NOTE: CONC. IS 4500 P.S.I., MIN., @ 28 DAYS, CLASS "C" PER 499.03

6S-01
PRECAST CONCRETE DOSING CHAMBER

NOT TO SCALE



6S-02
PRECAST CONCRETE TRASH ACCUMULATOR

NOT TO SCALE

WWTP 1

SEE SHEET 23 FOR DETAILS.

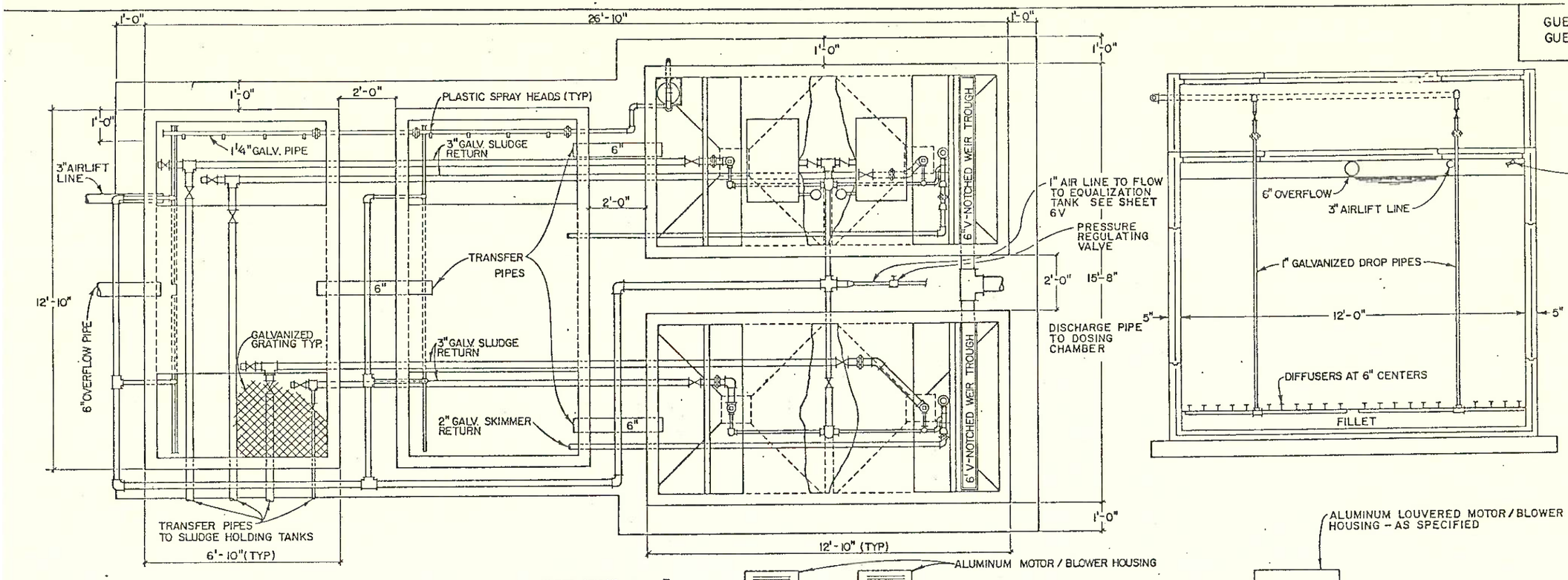
OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

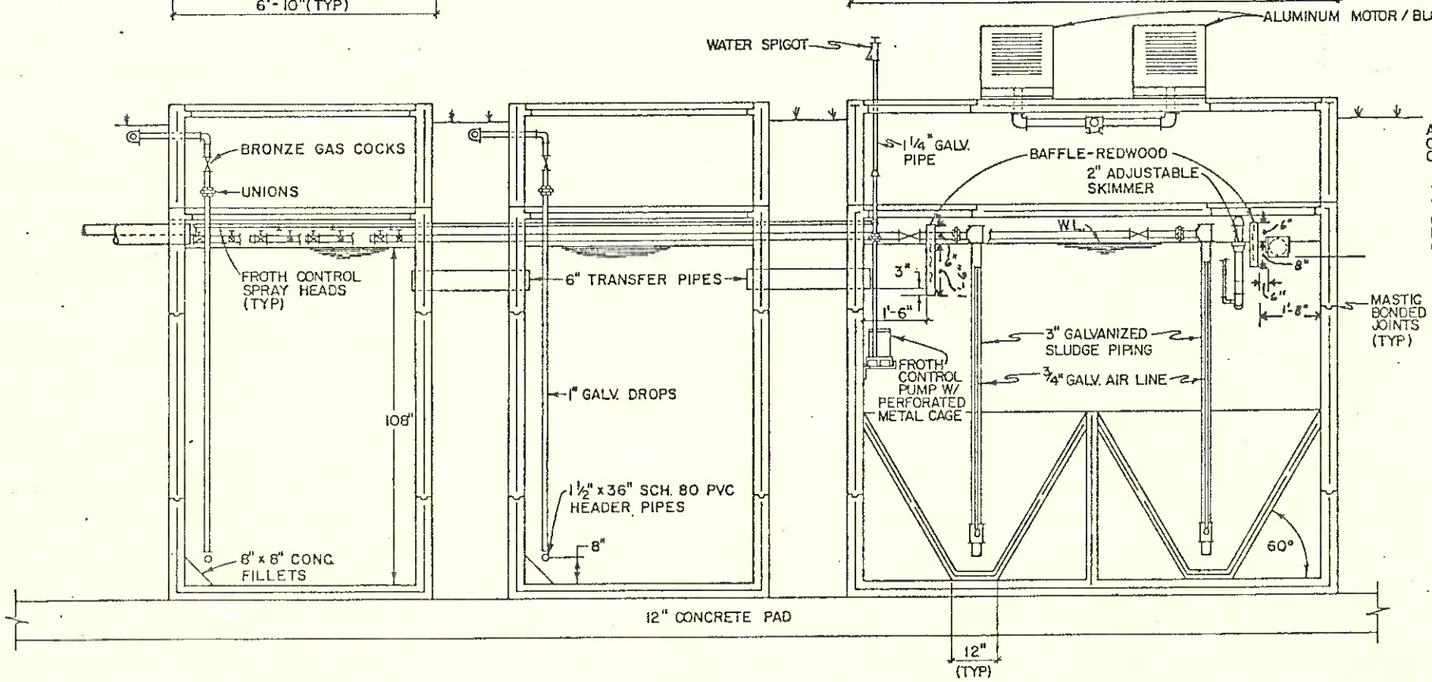
REVISIONS		SHEET NO
9/10/83 3-13-84 8-23-84 10-15-84	PRECAST CONCRETE DOSING CHAMBER AND TRASH ACCUMULATOR	6S
	ARCHITECTS - WRIGHT \ KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS - JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES - BATTELLE / COLUMBUS LABORATORIES	DATE

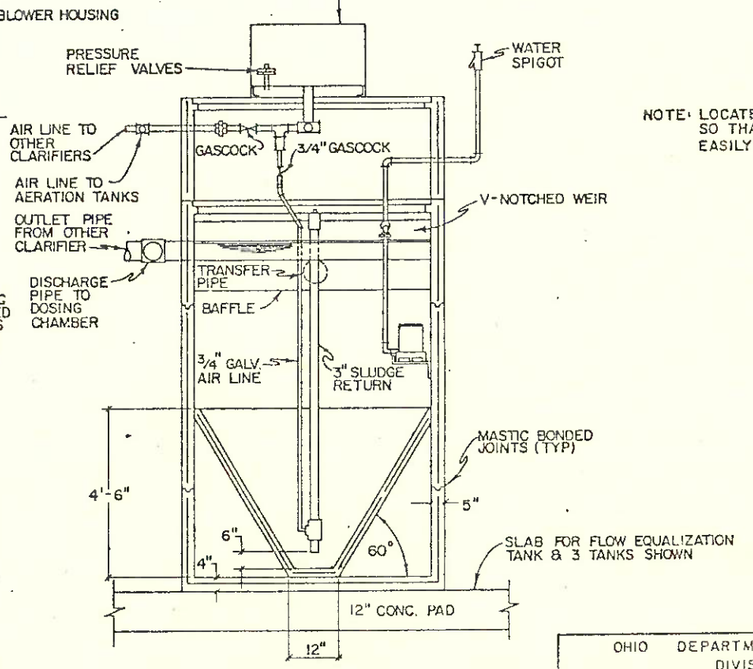
GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

18/66





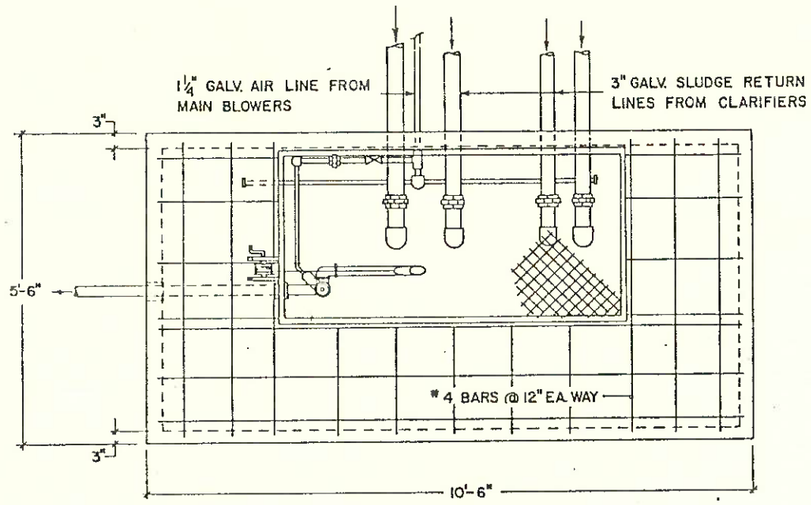


NOTE: LOCATE PRESSURE RELIEF VALVES SO THAT MOTOR HOUSING CAN BE EASILY REMOVED

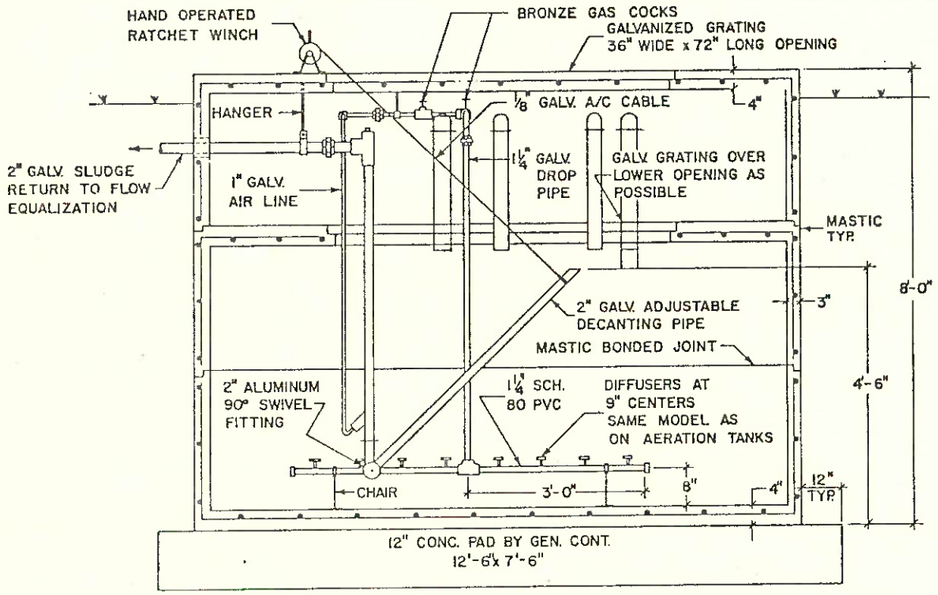
WWTP 2

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS	PRECAST CONCRETE EXTENDED AERATION SYSTEM	SHEET NO.
4/28/83 8-23-84		6T
	ARCHITECTS: WRIGHT, KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS: JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES: BATTELLE/COLUMBUS LABORATORIES	DATE



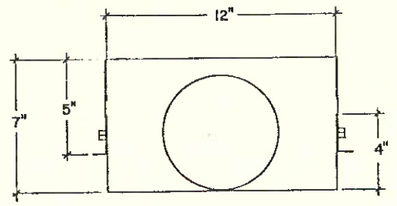
PLAN



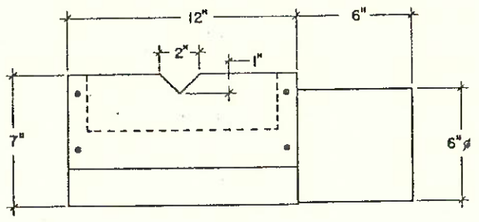
SECTION

PRECAST CONCRETE SLUDGE HOLDING TANK

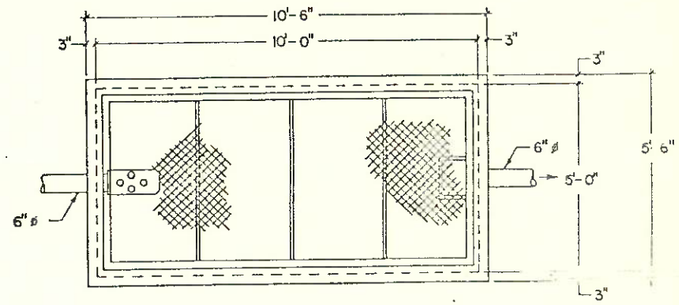
NOT TO SCALE



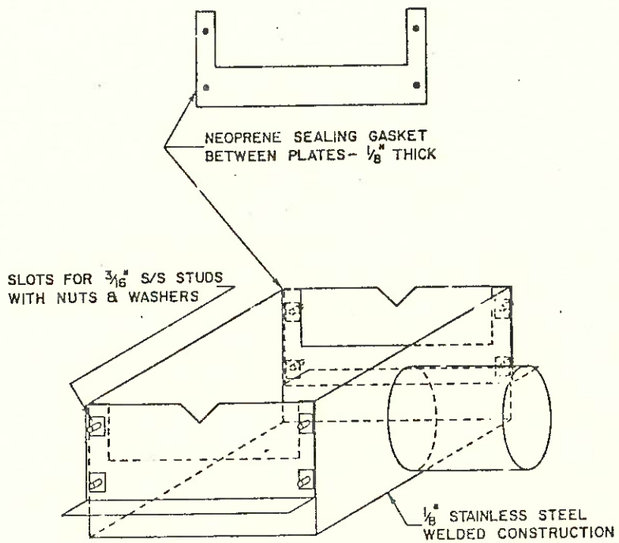
SECTION



SIDE



PLAN



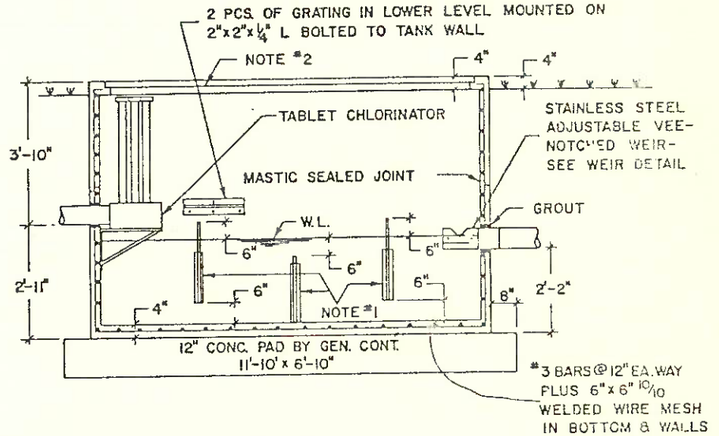
OBLIQUE

WEIR DETAIL

NOT TO SCALE

PRECAST CONCRETE CHLORINE CONTACT CHAMBER

NOT TO SCALE



SECTION

NOTES:
1. ⅛" PLASTIC BAFFLES HELD IN PLACE BY 1½" x 1½" x 3/16" ALUMINUM ANGLES BOLTED TO SIDEWALLS WITH ⅜" S/S BOLTS IN THREADED INSERTS.
2. 18 GA. x 9" WIDE x 1½" DP. GALV. INTERLOCK GRATING
3. RETENTION VOLUME IS 841 GAL.

WWTP 3

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

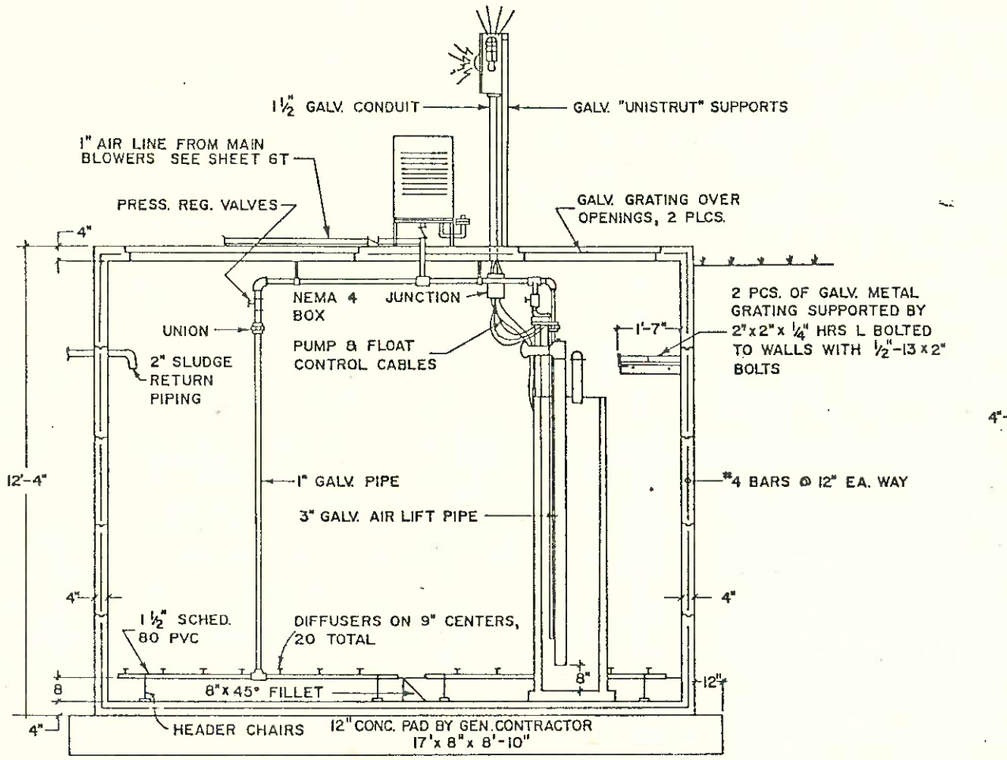
REVISIONS

PRECAST CONCRETE CHLORINE CONTACT CHAMBER AND SLUDGE HOLDING TANK

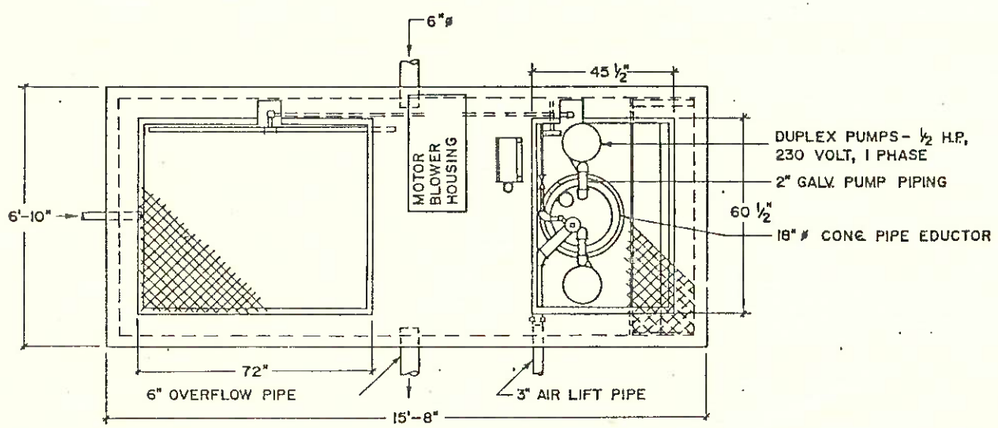
SHEET NO. 6U

ARCHITECTS: WRIGHT / KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO
ENGINEERS: JOHN E FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TECHNOLOGIES: BATTELLE / COLUMBUS LABORATORIES

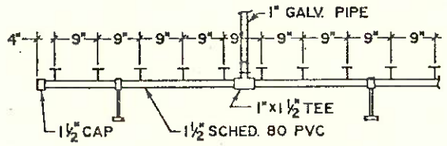
DATE



SECTION



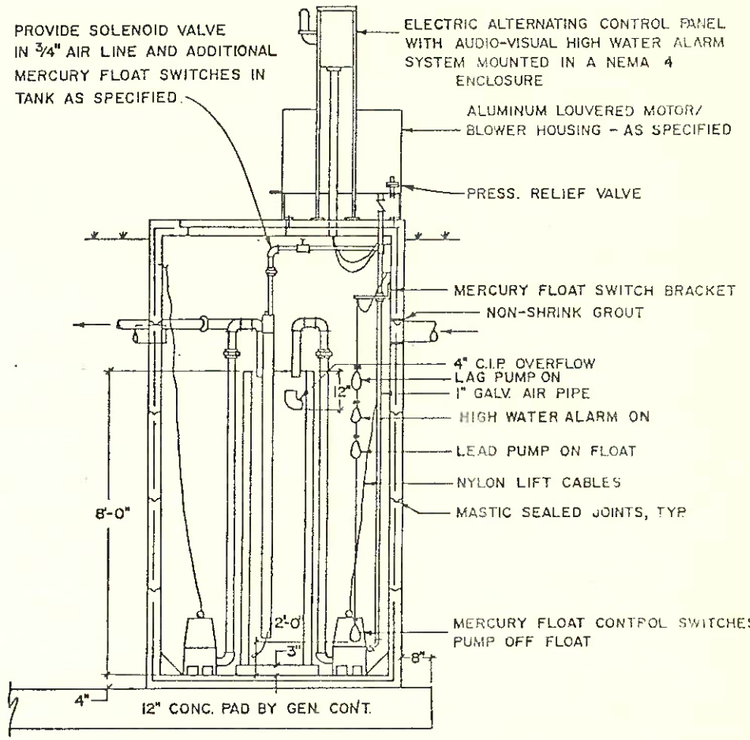
PLAN



AIR HEADER DETAIL

NOTES:

1. AIR TO BE SUPPLIED BY ONE ROTARY BLOWER DRIVEN BY A 1 H.P., 230 VOLT, 1 PHASE TEFC MOTOR ENCLOSED IN AN ALUMINUM, LOUVERED, HINGED, LOCKABLE CANOPY
2. PUMPS ARE CONTROLLED BY 3 MERCURY FLOAT CONTROL SWITCHES
3. PUMPS & BLOWER ARE NOT INTERLOCKED- BLOWER WILL AERATE CONTENTS EVEN IF PUMPS ARE IDLE
4. FLOAT SWITCH ELEVATIONS:
   a. PUMP "OFF" @ 24" OFF INTERIOR FLOOR
   b. PUMP "ON" @ 80" OFF INTERIOR FLOOR
   c. HIGH WATER ALARM ON @ 6" ABOVE PUMP "ON" FLOAT. d. LAG PUMP ON AT 92" OFF INTERIOR FLOOR.
5. TOTAL USEABLE VOLUME, AFTER DEDUCTING FILLETS AND 12" PUMP COVER, AND WITH FLOAT SWITCH SETTINGS AS SHOWN, IS 3,493 GALS.
6. CONC. IS 4500 P.S.I., MIN., @ 28 DAYS, CLASS "C" PER 499.03 REINFORCED WITH #4 BARS AT 12" EA. WAY IN ALL SURFACES



END SECTION

PRECAST CONCRETE FLOW EQUALIZATION TANK

NOT TO SCALE

WWTP 4

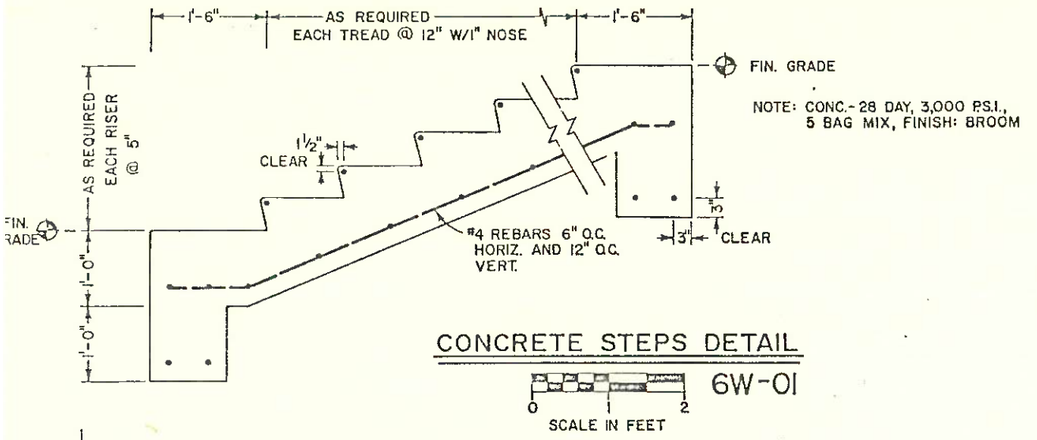
OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS		SHEET NO.
8-23-84 10-15-84	PRECAST CONCRETE FLOW EQUALIZATION TANK	6V
	ARCHITECTS - WRIGHT √ KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS - JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES - BATTELLE / COLUMBUS LABORATORIES	DATE

GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

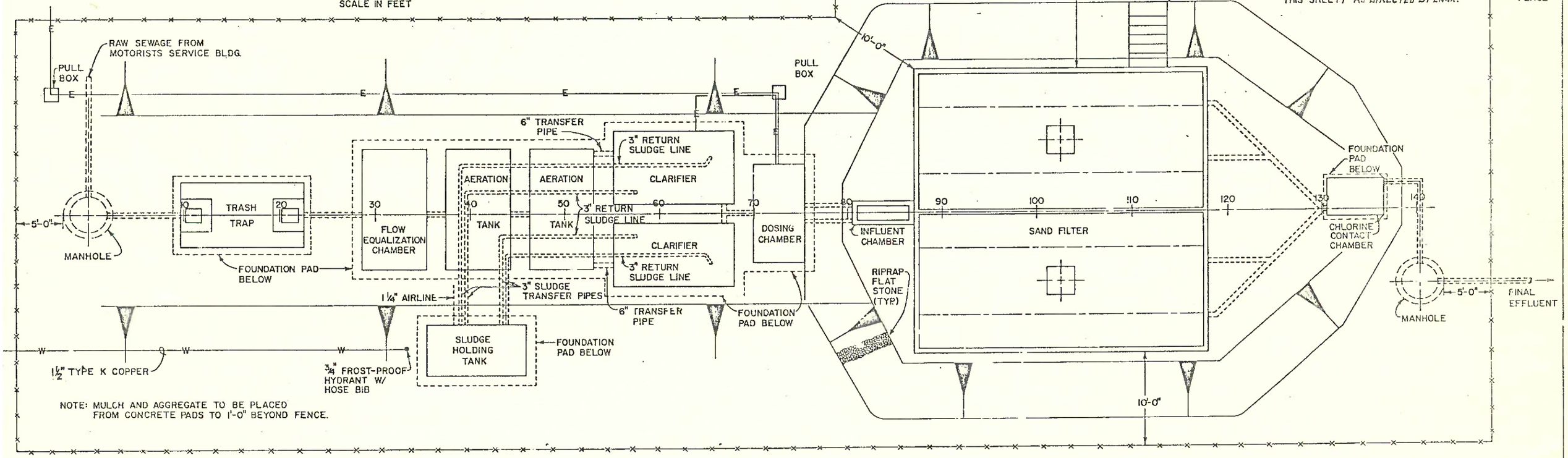
21/66



NOTE: CONC.- 28 DAY, 3,000 P.S.I., 5 BAG MIX, FINISH: BROOM

CONCRETE STEPS DETAIL 6W-01

SCALE IN FEET 0 2



NOTE: MULCH AND AGGREGATE TO BE PLACED FROM CONCRETE PADS TO 1'-0" BEYOND FENCE.

SITE LAYOUT
TYPICAL PRECAST CONCRETE WASTEWATER TREATMENT PLANT

SCALE IN FEET 0 5 10

6W-02

Note: Concrete and steel sewage plant operations are to be fundamentally equivalent and shall provide transfer pumps, air lift pipe, 8" transfer ports with gate valves and sludge return piping in order to operate at full and half capacity as desired. (See notes on sheet 24)

WWTP 5

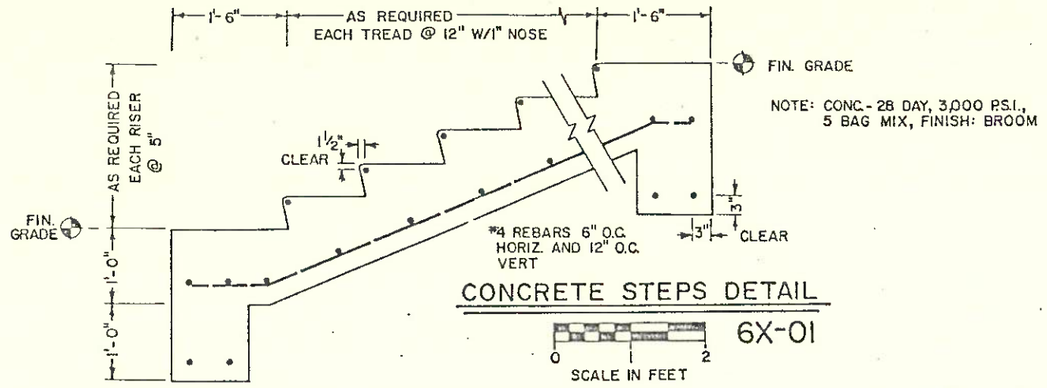
OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS		SHEET NO.
8-22-84	SITE LAYOUT PRECAST CONCRETE WASTEWATER TREATMENT PLANT	6W
	ARCHITECTS: WRIGHT/ KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES BATTELLE/COLUMBUS LABORATORIES	DATE

GUERNSEY COUNTY
GUE-70-19.37

OHIO
FHWA REGION 5

22
66



CONCRETE STEPS DETAIL

6X-01

0 2
SCALE IN FEET

SITE LAYOUT
TYPICAL STEEL WASTEWATER TREATMENT PLANT

0 5 10
SCALE IN FEET

6X-02

Note: Concrete and steel sewage plant operations are to be fundamentally equivalant and shall provide transfer pumps, air lift pipe, 8" transfer ports with gate valves and sludge return piping in order to operate at full and half capacity as desired. (See notes on sheet 24)

WWTP 6

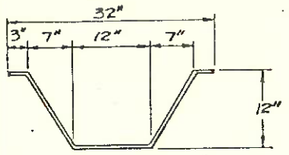
OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS		SHEET NO.
8-22-84	SITE LAYOUT STEEL WASTEWATER TREATMENT PLANT	6X
	ARCHITECTS: WRIGHT V KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS: JOHN E. FOSTER & ASSOCIATES, COLUMBUS, O ENERGY TECHNOLOGIES: BATTELLE/ COLUMBUS LABORATO	DATE

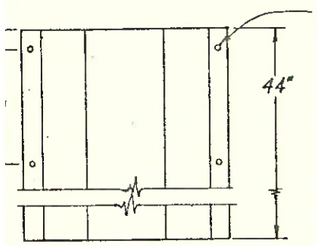
FHWA REGION	STATE	PROJECT	
5	OHIO		

23/66

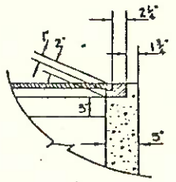
GUERNSEY COUNTY
GUE - 70 - 19.37



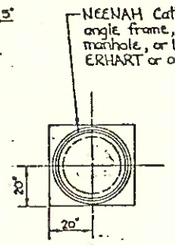
NOTE:
CONCRETE SHALL BE 4500 P.S.I. MIN.@ 28 DAYS CLASS "C" PER REINFORCED WITH 6"x6" 10/10 WELDED WIRE MESH & #4 BARS @ 12" EA. WAY IN ALL SURFACES.



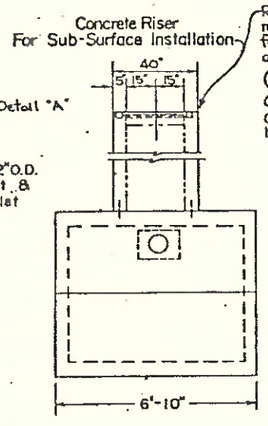
ALUMINUM BAFFLE

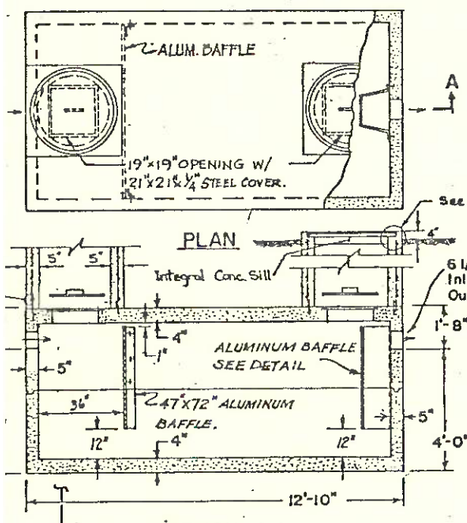


Detail "A"



Concrete Riser For Sub-Surface Installation

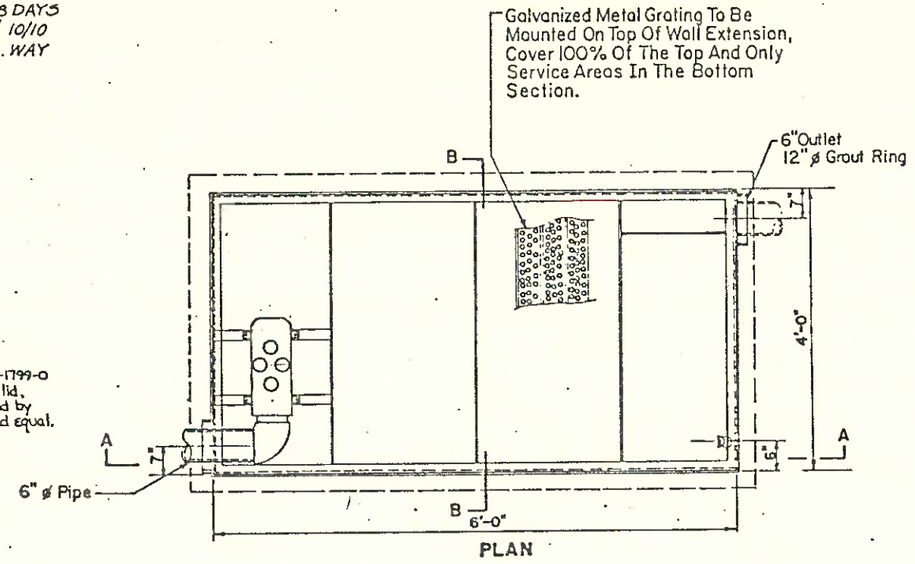




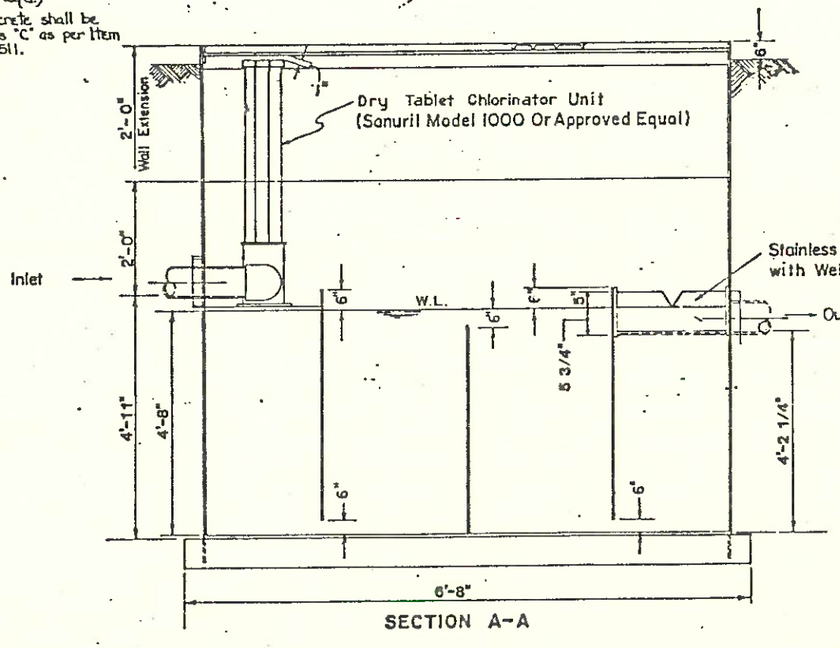
SECTION A-A

Note: Foundation Pad For Trash Accumulator Shall Be Sized And Anchored The Same As Shown For Chlorine Contact Chamber Section B-B.

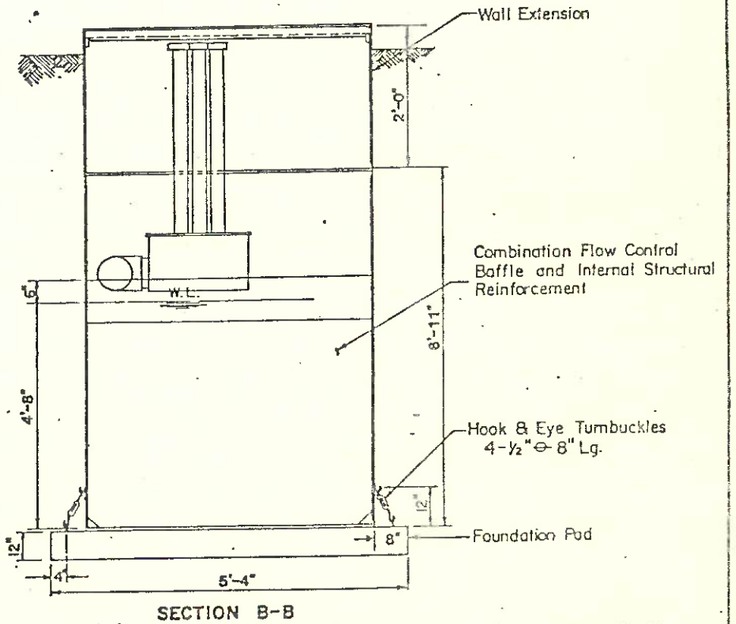
500 GAL. PRECAST CONCRETE TRASH ACCUMULATOR



PLAN



SECTION A-A



SECTION B-B

CHLORINE CONTACT CHAMBER

Note: For inlet & outlet invert Elevations See Sheet 16.

Vol. Gal.	Ret. Time
825	118 Min.

WWTP 7

BUREAU OF DESIGN SERVICES
OHIO DEPARTMENT OF TRANSPORTATION

REVISIONS
11/5/82
11-27-82
4/28/83
3-13-84

TRASH ACCUMULATOR & CHLORINE CONTACT CHAMBER

SHEET NO. RRA 10

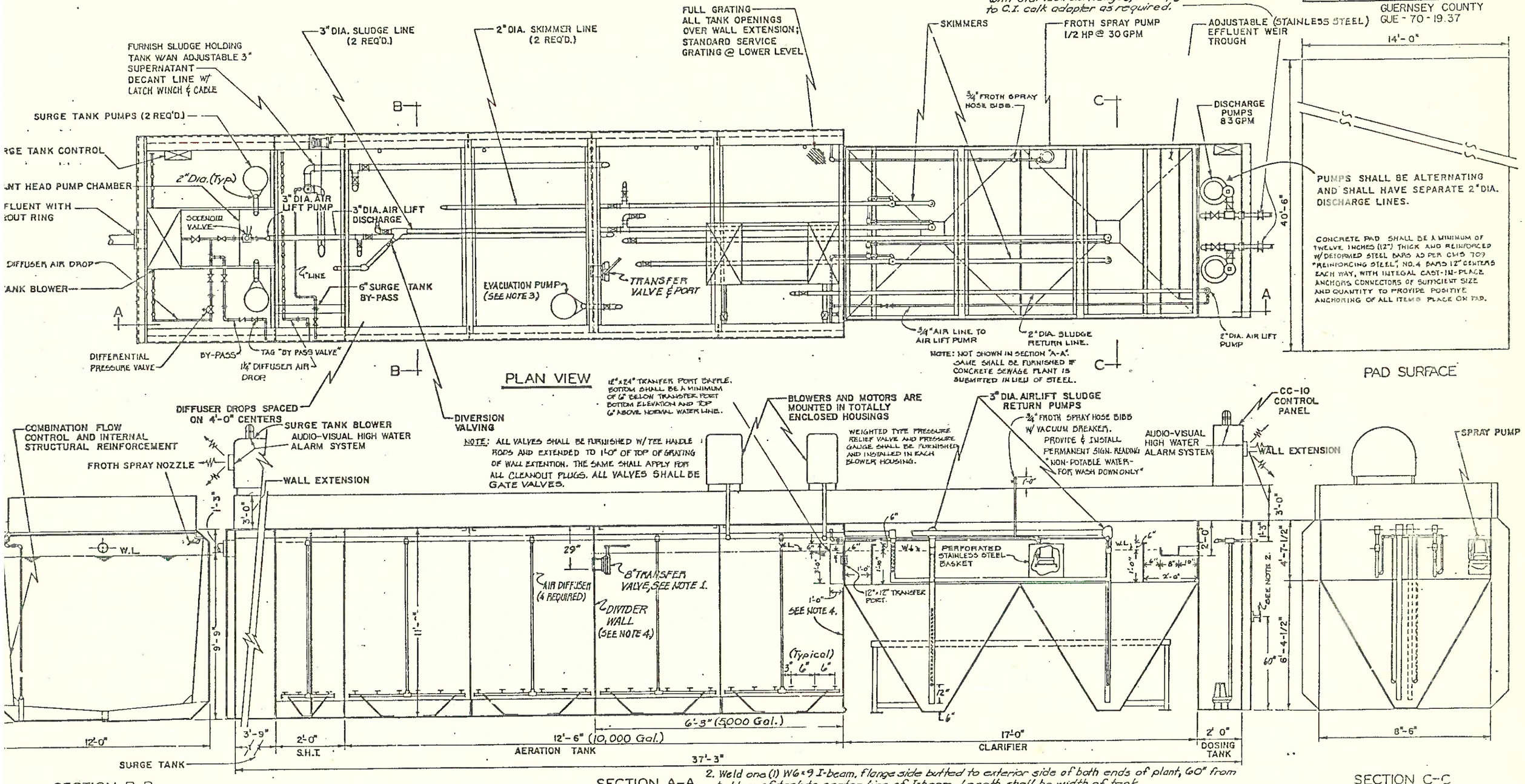
DATE 3-1-78

FHWA REGION	STATE	PROJECT	
5	OHIO		

24/66

GUERNSEY COUNTY
GUE - 70 - 19.37

Furnish & Install 2" Spanflex rubber expansion joint as mfg. by Flexaust or approved equal, complete with std. 125# C.I. flanges, bolts & gaskets and I.P.S. to C.I. calk adapter as required.



PLAN VIEW

12"x24" TRANSFER PORT BAFFLE. BOTTOM SHALL BE A MINIMUM OF 6" BELOW TRANSFER PORT BOTTOM ELEVATION AND TOP 6" ABOVE NORMAL WATER LINE.

NOTE: ALL VALVES SHALL BE FURNISHED W/ TEE HANDLE RODS AND EXTENDED TO 1'-0" OF TOP OF GRATING OF WALL EXTENTION. THE SAME SHALL APPLY FOR ALL CLEANOUT PLUGS. ALL VALVES SHALL BE GATE VALVES.

SECTION B-B

NOTES:

1. The 8" Transfer Port shall be constructed of a 8" schedule 40 steel pipe 8" long, welded in a hole in the aeration tank divider wall. The pipe shall be threaded on the valve end to receive a 8"-150lb, 8 bolt, raised face, threaded flange as manufactured by Grinnell, fig. 1931 or approved equal, to which shall be attached a 8" butterfly valve. The valve shall a 8" Nibco/Scott lug type butterfly valve with Buna-N-Seal, lever lock handle and plate or an approved equal.

EL ER	DESIGN FLOW G.P.D.	AERATION VOL. GAL.	CLARIFIER VOL. GAL.	BLOWER CFM	BLOWER HP	No. OF SECTIONS SHIPPED	No. OF ANODES	S.H.T. VOL. GAL.	DOSING TANK VOL. GAL.	SURGE TANK VOL. GAL.
0-33-3	10,000	5000/10,000	5,032	54	3	1	4	1,650	825	2800

SECTION A-A

2. Weld one (1) W6x9 I-beam, flange side butted to exterior side of both ends of plant, 60" from bottom of tank to center line of I-beam. Length shall be width of tank.
3. Evacuation pump shall be a Peabody-Barnes Model No. 5E-52, ½" H.P., 240V. single phase, 60hz., The pump shall rest on the floor of the tank with a 2" discharge riser which shall past thru the divider wall 12" below the top of tank. Provide a union in horiz. for ease of pump removal. The discharge pipe shall attach to a 2" nipple, securely welded on both sides of the divider wall, and project 8" beyond the face of wall with a 2" gate valve and short 45° mitered nipple. The pump shall be wired directly into the main blower control panel as required and shall be controlled by a 240V. manual, heavy-duty, oil tight, knob operated on-off switch.
4. All partition walls shall be reinforced with 2'-4"x4"x¼" steel angles welded to walls in a horizontal position, spaced 2'-8" apart and 2'-8" from the bottom. with same size angles placed vertically to form a H-frame, each spaced 2'-0" from ℄ of tank. Vertical angles shall be 11'-0" long.

SECTION C-C

REV. AS PER E.P.A., 7-28-78

WWTP 8

BUREAU OF DESIGN SERVICES
OHIO DEPARTMENT OF TRANSPORTATION

REVISIONS
7-28-78
4/28/83
1/31/84
6-23-84

AEROBIC DIGESTION SEWAGE TREATMENT SYSTEM
5,000/10,000 GAL. CAPACITY

SHEET NO. RRA 11
DATE 3-1-78

AEROBIC DIGESTION SEWAGE TREATMENT SYSTEM

FHWA REGION	STATE	PROJECT	
5	OHIO		

25/66

GUERNSEY COUNTY
GUE-70-19.37

1-PHASE, 60 HERTZ
240 VOLT, 3-WIRE SERVICE

N L1 L2

CB-1 MI OL 1TI 1T2 M1 BLOWER MOTOR NO.1 HP-3

CB-2 M2 OL 2TI 2T2 M2 SPRAY PUMP HP-1/2

MAIN DISCONNECT (**)

1 WEEKDAY TIMER 5,6
2 WEEKEND TIMER 6
3 HAND SW-1 OVERLOAD M1 AUTO — TMI-A TM2-A TMI-B — BLOWER MOTOR STARTER 8
4 HAND SW-2 OVERLOAD M2 AUTO — MI — SPRAY PUMP STARTER

CONTROL PANEL NO.1 (1/2)
CONTROL PANEL NO.2

CB-3 M3 OL 3TI 3T2 M3 BLOWER MOTOR NO.2 HP-3

7 DAY PROGRAM TIMER 14
HAND SW-3 OVERLOAD M3 AUTO — TM3-A — BLOWER MOTOR STARTER 9

CB-4 120 VOLT SERVICE OUTLET DUPLEX — SERVICE OUTLET

CB-5 M4 OL 4TI 4T2 M4 EVACUATION PUMP HP-1/2

M4 SW-4 OVERLOAD M4 R — EVACUATION PUMP STARTER

1-PHASE, 60 HERTZ, 240 VOLT, 3-WIRE SERVICE.
RUN CONTINUOUS TO ALL CONTROL PANELS AS SHOWN.

NOTE:
1. ALL ELECTRICAL CONTROL PANELS SHALL BE U.L. APPROVED, NEMA 4 ENCLOSURES.

1-PHASE, 60 HERTZ, 240 VOLT, 3-WIRE SERVICE

N L1 L2

CB-1 MI OL 1TI 1T2 M1 SURGE PUMP MOTOR NO.1 HP-1/2

CB-2 M2 OL 2TI 2T2 M2 SURGE PUMP MOTOR NO.2 HP-1/2

CB-3 M3 OL 3TI 3T2 M3 BLOWER MOTOR NO.3 HP-1

CB-4

HORN
SILENCE SWITCH — ON / SILENCE — CRI — FLASH — R 100 WATT — HI ALARM
RI — AUXILIARY RELAY
W — SILENCE
RI TO ANNUNCIATOR

FS-4 FLOAT SWITCH
ALARM LIGHTS & HORN

1 FS-2 FLOAT SWITCH LEAD PUMP-ON — AT-A — H O A SW-1 — AT — ALTERNATOR TIMER 3,5
2 FS-1 FLOAT SWITCH PUMPS-OFF — MI-AUX M2-AUX — CRI-A AT-B CRI-B — H O A SW-2
MI — OVERLOAD — SURGE PUMP MOTOR STARTER NO.1
M2 — OVERLOAD — SURGE PUMP MOTOR STARTER NO.2
7A FS-3 FLOAT SWITCH LAG PUMP ON — CRI-C — CR — CONTROL RELAY 4, 6, 7A
TM — 7 DAY PROGRAM TIMER 10
TMI-A M1 M2 — H O A SW-3 — M3 — OVERLOAD — BLOWER MOTOR NO.3 STARTER
FS-4 SOLENOID VALVE OPENS WHEN ENERGIZED BY FLOAT. PLACE WEIGHTED FLOAT SWITCH IN FLOW EQUALIZATION EDUCTOR. — SV — CONTROL PANEL NO.3 (3/4) CONTROL PANEL NO.4

MAIN DISCONNECT (**)

CB-1 MI OL 1TI 1T2 M1 DOSING PUMP NO.1 HP-1/2
CB-2 M2 OL 2TI 2T2 M2 DOSING PUMP NO.2 HP-1/2
CB-3

HORN
SILENCE SWITCH — ON / SILENCE — CRI — FLASH — R 100 WATT — HI ALARM
R2 — AUXILIARY RELAY
W — SILENCE
R2 TO ANNUNCIATOR

FLOAT SWITCH-4
ALARM LIGHTS & HORN

1 FLOAT SWITCH-3 LAG — CR-A — CR1 — CR-1 3,7,9
2 FLOAT SWITCH-2 LEAD — ALT. OFF-ON SW-1 — ALT — ALTERNATOR 6,8
3 FLOAT SWITCH-1 OFF — MI AUX M2 AUX — ALT-A CR-B ALT-B CR-C — AUTO OFF HAND SW-2 SW-3
M1 — OVERLOAD — DOSING PUMP NO.1
M2 — OVERLOAD — DOSING PUMP NO.2

CB-4 — 120 VOLT SERVICE OUTLET DUPLEX — SERVICE OUTLET

WWTP 9

BUREAU OF DESIGN SERVICES — DEPARTMENT OF TRANSPORTATION — OHIO	SHEET NO. RRA 12	DATE 2-1-78
REVISIONS 8-5-84, 10-15-84	AEROBIC DIGESTION SEWAGE TREATMENT SYSTEM WIRING DIAGRAM	

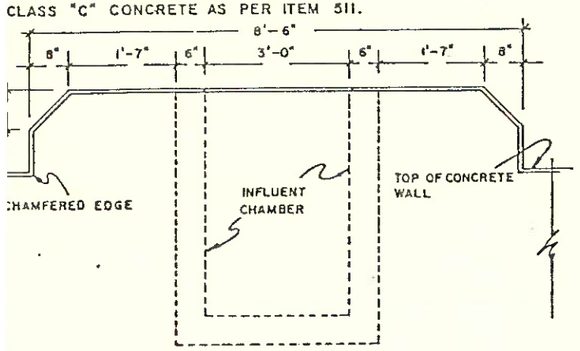
10,000 GALLON AEROBIC DIGESTION SEWAGE TREATMENT SYSTEM WIRING DIAGRAM

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

28/66

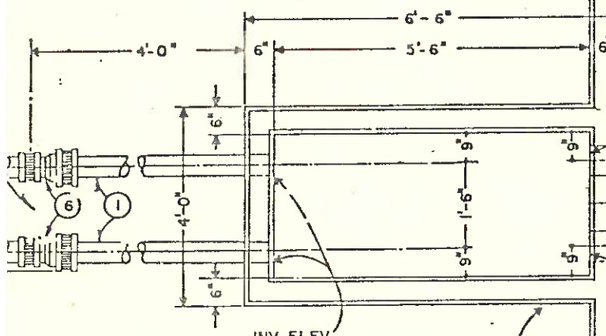
GUERNSEY COUNTY
GUE-70-19.37

SURFACE SAND FILTER WALLS AND INFLUENT CHAMBER THROUGHOUT SHALL BE CONSTRUCTED OF REINFORCED CLASS "C" CONCRETE AS PER ITEM 511.



WALL WING DETAIL

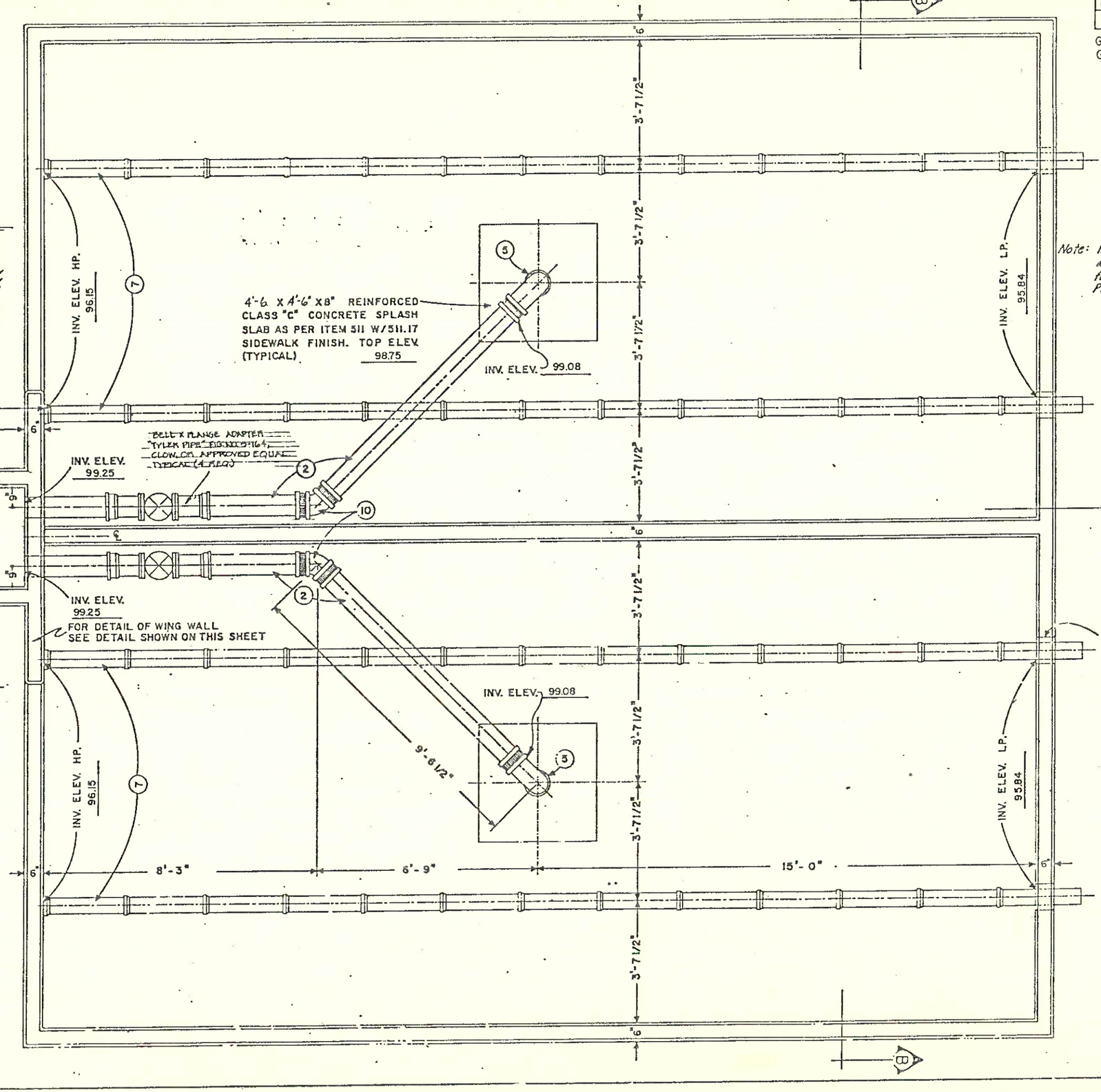
R CONTINUATION
E SHEET NO. 17



:CAVATION AND BACKFILL FOR ALL SEWAGE TREATMENT :RUCTURES SHALL BE IN CONFORMANCE TO THE :QUIREMENTS OF ITEM 503-EXCAVATION FOR STRUC-:RES.

:CAVATION AND BACKFILL FOR ALL SANITARY SEWER :PING, EXCLUDING PIPING WITHIN THE SURFACE SAND :LTERS, SHALL CONFORM TO THE REQUIREMENT : ITEM 603 USING CLASS "C" BEDDING.

:L FORM WORK REQUIRED FOR THE CONSTRUCTION : THE SEWAGE TREATMENT STRUCTURES SHALL :NFORM TO THE REQUIREMENTS OF ITEM 508 :LSEWORK AND FORMS.



Note: Invert Elevations Shown on this Sheet are relative Elevations. For Control Elevations for each Site, see Sewage Treatment Plant Sheet 16

FOR CONTINUATION OF SURFACE SAND FILTERS PIPING LAYOUT SEE SHEET NO. 30

FORM 8-INCH X 8-INCH PIPE OPENINGS FOR ALL PIPE LINES, FOUR (4) REQ. (TYPICAL)

PLAN VIEW OF SURFACE SAND FILTERS
NOT TO SCALE

PERE.P.A.

WWTP 12

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

DATE
3-1-78
7-28-78
8-8-78
12-12-80
4/29/83
3-14-84

SURFACE SAND FILTERS
10,000 GPD

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

29
66

GUERNSEY COUNTY
GUE-70-19.37

3/8 ALUMINUM ROD LIFT HANDLES FOR FLOOR PLATES

3/8-INCH FLOOR PLATE TO LAY IN 1-INCH ANGLE FRAME.

6'-6"

FINISHED TOP ELEV. 103.25

FURNISH & INSTALL WHEEL HANDLE & EXTENSION ROD

SEE PIPE HANGER DETAIL ON SHEET NO. 31 (TYP.)

1'-5 1/4"

6"

3'-3"

9"

FIN. ELEV. _____

INV. ELEV. 100.00

6

1

6"

O SEPARATE INLETS REQ'D.

INV. ELEV. 99.25

1'-6"

FOR CONTINUATION SEE SHEET NO. 17

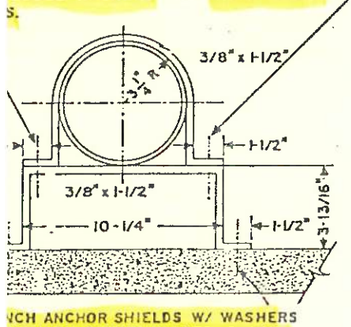
EWAGE TREATMENT PROFILE FOR TARGET INV. ELEV.

ORCING THROUGHOUT THE CONCRETE STRUCTURES OF URFACE SAND FILTER WALLS AND THE INFLUENT CHAMBER . BE OF REINFORCED STEEL DEFORMED BARS OF WHICH RIALS AND METHOD OF PLACING SHALL CONFORM TO REQUIREMENTS SPECIFIED UNDER ITEM 509 REINFORCING -

ORCED STEEL DEFORMED BARS SHALL BE SIZE NUMBER 500"), PLACED AT TWELVE-INCHES (12") ON CENTERS, WAY THROUGHOUT THE CONSTRUCTION OF THE SURFACE FILTER WALLS AND INFLUENT CHAMBER WALLS AND STANDARD BENDS AND SPLICES SHALL CONFORM TO 509 REINFOPCING STEEL SHALL BE AS PER 709-ORCING STEEL. ALLOW 2-INCHES BETWEEN STEEL AND OR FACE OF WALLS. STANDARD 90° BEND (T) SHALL BE USED S LOCATED IN INFLUENT CHAMBER WALLS TO ACHIEVE SUFFICIENT DEVELOPMENT.

STRUCT FROM SPECIFIED CLIP ANCHOR ERIAL, SIZE 3/8-INCH x 1-1/2-INCH.

INCH x 2-INCH CADIUM PLATED BOLTS OUBLE WASHERS AND CADIUM PLATED S.



NCH ANCHOR SHIELDS W/ WASHERS 1/2-INCH CADIUM PLATED BOLTS.

E SUPPORT AT 90° ELLS
SCALE 3" = 1'-0"

6" GATE VALVE, M.J. w/NRS SEE SPECIFICATIONS FOR DETAILS

ADAPTERS, SEE NOTE SHEET WWTP 12

2

INV. ELEV. 99.08

5

NOTE:
CUT 3" OFF 90° ELL. TO OBTAIN PROPER CLEARANCE ABOVE SLAB

4'-6" X 4'-6" X 8" REINFORCED CLASS "C" CONCRETE SPLASH SLAB AS PER ITEM 511. W/511.17 SIDEWALK FINISH. TOP ELEV. 98.75

10

SEE PIPE SUPPORT DETAIL ON THIS SHEET.

3'

FOR VARIOUS GRAVEL SIZES SEE NOTE BELOW

FILTER SAND, SEE NOTE BELOW.

FORM 8-INCH X 8-INCH PIPE OPENINGS FOR ALL PIPE LINES, FOUR (4) REQ. (TYPICAL)

FINISHED TOP ELEV. 101.81

6-INCH

FINISHED GRADE ELEV. 101.31

8'-10"

1'-6"

VARIBLE

FOR CONTINUATION OF SURFACE SAND FILTERS PIPING LAYOUT SEE SHEET NO. 30

7

SLOPE 1/8-INCH PER FOOT

6" TYPICAL

FINISHED BOTT. ELEV. 94.98

INV. ELEV. HP 96.15

INV. ELEV. LP. 95.84

1'-6" TYPICAL

CONC. FTG. WITH 2-NO.4'S CONT. (TYPICAL)

SURFACE SAND FILTERS
SECTION "A-A"
NOT TO SCALE

15'-0

6"

15'-0

FINISHED GRADE

FILTER SAND SHALL BE AN APPROVED, CLEAN COARSE SAND HAVING AN EFFECTIVE SIZE BETWEEN 0.40 MM. AND 0.80 MM. AND A UNIFORMITY COEFFICIENT NOT GREATER THAN 3.00. SAND SHALL BE APPROVED AS PER THE OHIO E.P.A. REQUIREMENTS AND COST SHALL BE INCLUDED IN THE BID ITEM.

SAND BED FIN. ELEV. 98.75

6'-10"

3'-9 1/4"

6"

3'-7 1/2" 3'-7 1/2" 3'-7 1/2" 3'-7 1/2" 3'-7 1/2" 3'-7 1/2"

SLOPE POINT OF RIDGES 1/8-INCH PER FOOT

7 (TYPICAL)

SLOPE 1" TO 1'

INV. ELEV. HP. 96.15

6"

6"

1'-6" (TYPICAL)

3" (MIN.) 3/4" TO 1-1/2" GRAVEL
3" - 1/4" TO 3/4" GRAVEL
3" - 1/8" TO 1/4" GRAVEL

SURFACE SAND FILTERS
SECTION "B-B"
NOT TO SCALE

Note: Invert Elevations Shown on this Sheet are relative Elevations. For Control Elevations for each Site, see Sewage Treatment Plant Sheet 16

WWTP E

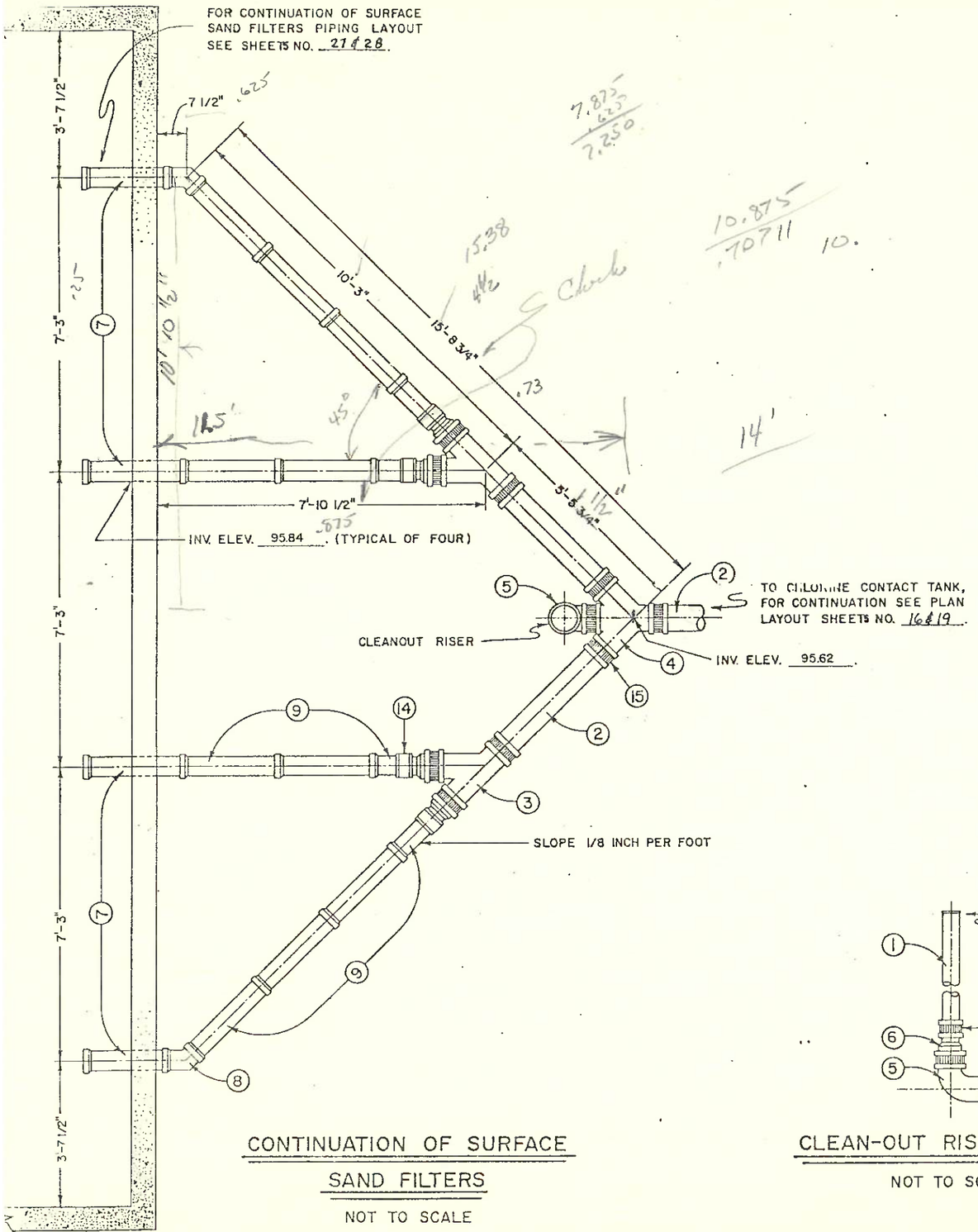
BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

SURFACE SAND FILTERS
10,000 GPD

5-1-78
7-28-78
8-8-78
2-25-81
4/29/83
5-20-83
3-14-84

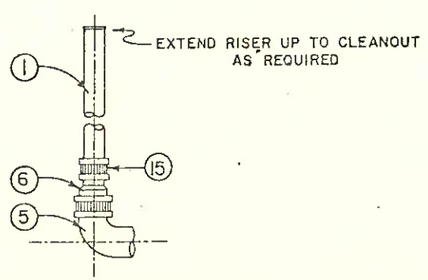
REV. PER E.P.A. 7-28-78

GUERNSEY COUNTY GUE - 70- 19.37	OHIO FHWA REGION 5	30 66



CONTINUATION OF SURFACE SAND FILTERS

NOT TO SCALE



CLEAN-OUT RISER DETAIL

NOT TO SCALE

PIPE AND FITTING LEGEND

1. 4-INCH NO HUB CAST-IRON SOIL PIPE
2. 6-INCH, SAME AS ABOVE
3. 6-INCH x 6-INCH NO HUB CAST-IRON SOIL 45° WYE
4. 6-INCH x 6-INCH NO HUB CAST-IRON SOIL DOUBLE WYE BRANCH
5. 6-INCH NO HUB CAST-IRON SOIL 1/4 BEND
6. 6-INCH x 4-INCH NO HUB CAST-IRON SOIL REDUCER
7. 4-INCH EXTRA STRENGTH PERFORATED VITRIFIED CLAY PIPE 706.08 WITH 706.12 RESILIENT AND FLEXIBLE JOINTS.
8. 4-INCH EXTRA STRENGTH VITRIFIED CLAY PIPE FITTING 45° CUT CURVE 706.08 WITH 706.12 RESILIENT AND FLEXIBLE JOINTS.
9. 4-INCH EXTRA STRENGTH VITRIFIED CLAY PIPE 706.08 WITH 706.12 RESILIENT AND FLEXIBLE JOINTS
10. 6-INCH NO HUB CAST-IRON SOIL 1/8 BEND
11. 4-INCH x 2-INCH NO HUB CAST-IRON SOIL 45° WYE AND 1/8 BEND
12. 4-INCH NO HUB CAST-IRON SOIL 1/4 BEND
13. 2-INCH NO HUB CAST-IRON SOIL PIPE
14. 4-INCH VITRIFIED CLAY TO 4-INCH CAST-IRON PIPE CONNECTOR
15. NO HUB CAST-IRON SOIL PIPE CONNECTOR

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS 4/29/83	SURFACE SAND FILTERS 10,000 GPD	SHEET NO.

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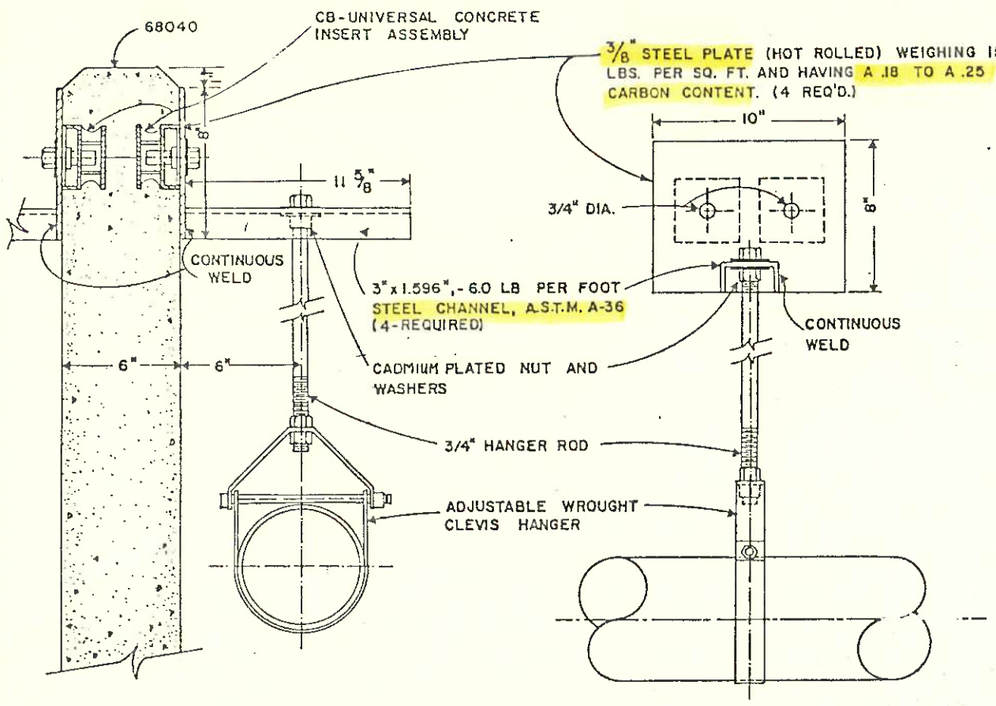
ENERGY TECHNOLOGIES BATTELLE/COLUMBUS LABORATORIES



PIPE HANGER DETAILS
SCALE 3" = 1'-0"

6-INCH ADJUSTABLE WROUGHT CLEVIS HANGER GRINNELL FIG. NO. 260 OR EQUAL BY FEE & MASON OR ELCEN (4-REQUIRED)

CB-UNIVERSAL CONCRETE INSERT ASSEMBLY WITH CADMIUM PLATED BOLT AND WASHER, GRINNELL FIG. NO. 282 OR EQUAL BY FEE & MASON OR ELCEN. (8 REQUIRED)

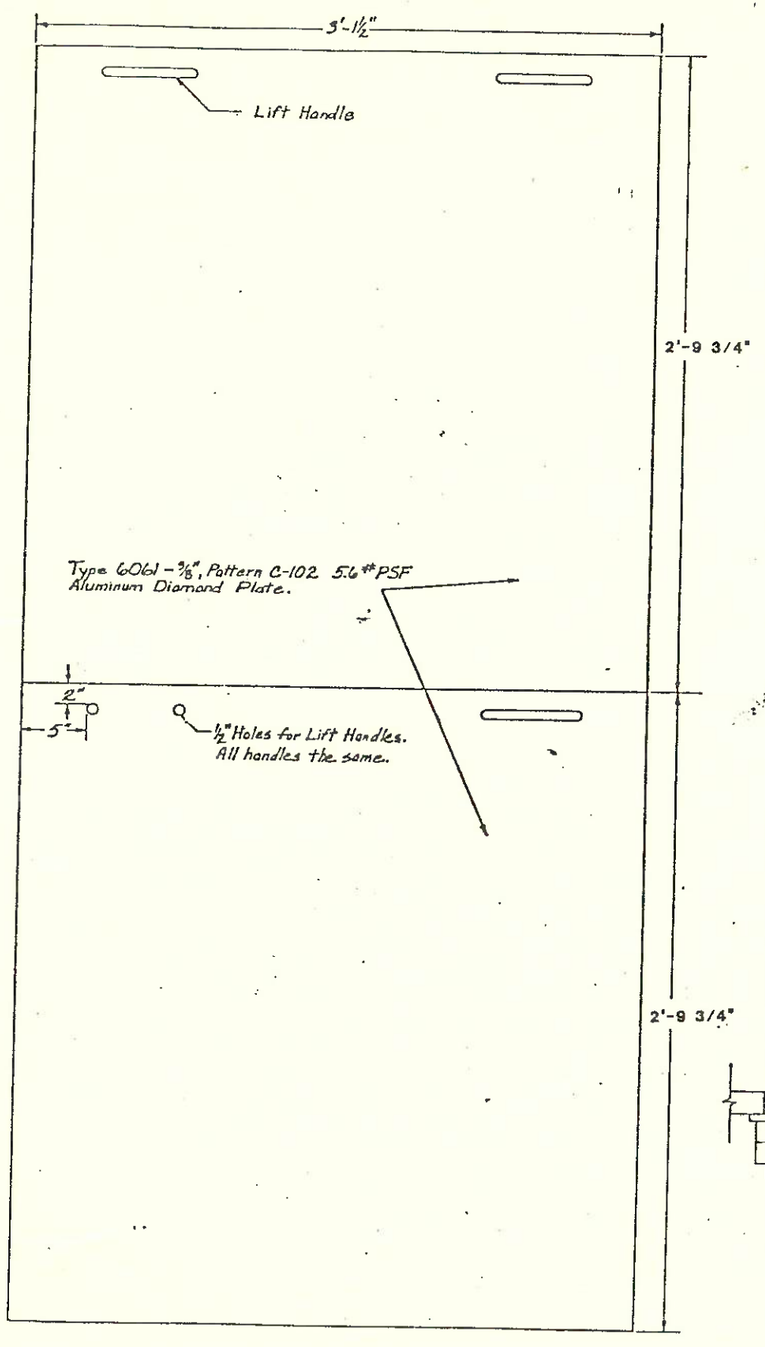
WWTP 15

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

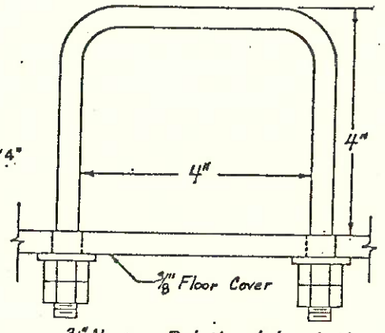
SURFACE SAND FILTERS
10,000 GALLON CAPACITY

DATE 3-1-78

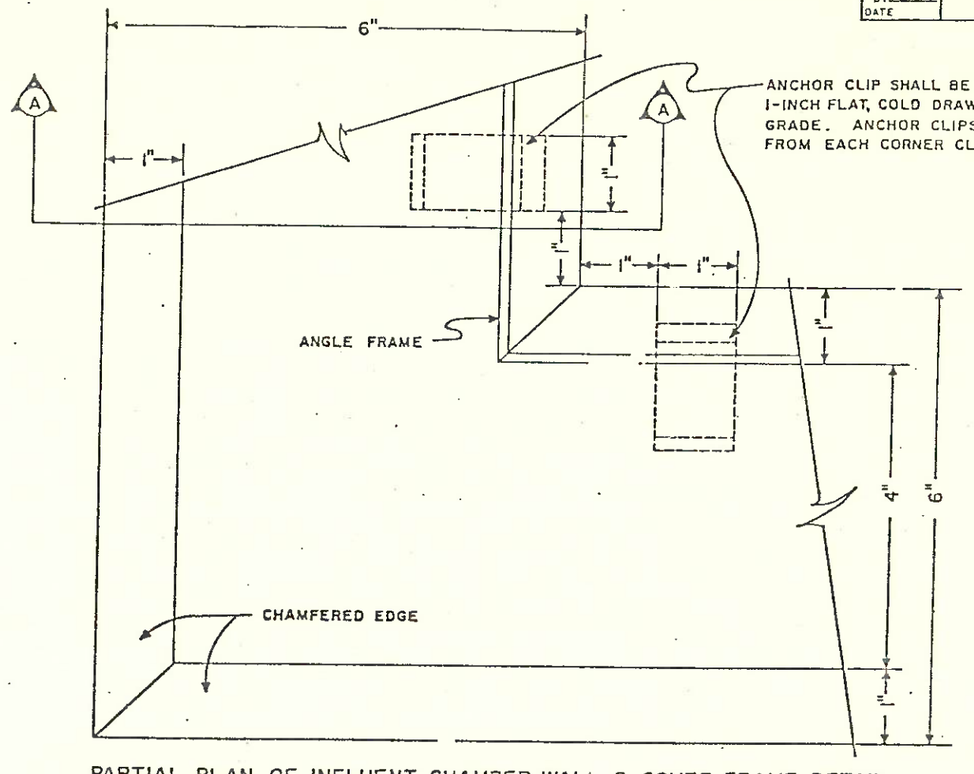
CALC. BY / DATE	GUERNSEY COUNTY	OHIO	32
CHKD. BY / DATE	GUE - 70 - 19.37	FHWA REGION 5	66



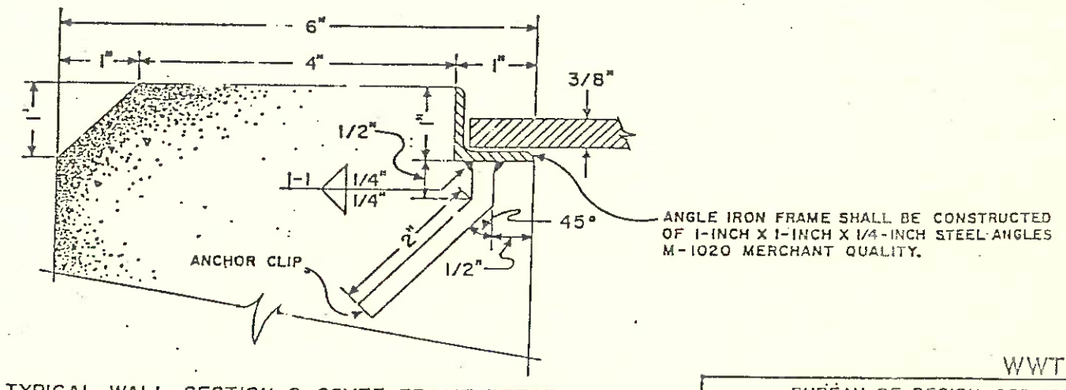
SEWAGE INFLUENT CHAMBER COVER



FLOOR COVER LIFT HANDLE



PARTIAL PLAN OF INFLUENT CHAMBER WALL & COVER FRAME DETAIL



TYPICAL WALL SECTION & COVER FRAME DETAIL
SECTION "A-A"

WWTP 16

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

SEWAGE INFLUENT CHAMBER DETAILS	DATE 10-5-82 1-11-83

FHWA REGION	STATE	PROJECT	
5	OHIO		

33/66

GUERNSEY COUNTY
GUE-70-19.37

WATER LINE GENERAL NOTES

SCOPE OF WORK

WORK SHALL CONSIST OF CONSTRUCTING A WATER MAIN, BETWEEN THE EXISTING TERMINAL OF THE 5 INCH WATER MAIN OF SEWER DISTRICT NO. 6 NEAR THE MAIN ENTRANCE TO THE GUERNSEY COUNTY FAIRGROUNDS AND THE PROPOSED MOTORIST SERVICE BUILDING IN THE INTERSTATE REST AREA GUE-70-19.37, EASTBOUND. THE MAIN AND ALL BRANCHES SHALL BE CONSTRUCTED WITHIN THE PERMANENT RIGHT-OF-WAY OF INTERSTATE 70 AND GUERNSEY COUNTY ROAD NO. 670. THE MAIN SHALL BE JACKED UNDER INTERSTATE 70 AND SHALL ALSO INCLUDE THE INSTALLATION OF METER PITS (WITH METERS), COMPLETE IN PLACE, AS DETAILED IN THE PLANS, MATERIALS LIST, AND SPECIFICATIONS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR EACH SPECIFIC ITEM.

ITEM 814 - NEW WATER MAIN, AS PER PLAN

ALL NEW WATER MAIN CONSTRUCTION SHALL BE MADE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION NO. 814, "WATER MAINS AND SERVICE BRANCHES" WITH THE EXCEPTION OF SPECIFIC PAY ITEMS DESCRIBED IN THE ESTIMATED QUANTITIES LIST INCLUDED IN THE PLAN. ALSO INCLUDED IN THIS ITEM FOR PAYMENT IS THE CONNECTION OF THE NEW WATER MAIN TO THE EXISTING WATER MAIN AS SHOWN ON THE PLANS. SEE ADDITIONAL NOTE ON SHEET 39. BETWEEN STATIONS 9+88 TO 18+00 AND 135+90 TO 136+28, DUCTILE IRON PIPE SHALL BE USED. BETWEEN STATIONS 18+00 AND 135+00, IN ADDITION TO THE ITEM 814 SPECIFICATION THE FOLLOWING SPECIFICATION SHALL GOVERN. HOWEVER, IN THE CASE OF A CONFLICT ODOT SPECIFICATIONS SHALL GOVERN.

A. PLASTIC PIPE MATERIALS AND INSTALLATION
PLASTIC PIPE SHALL BE UNPLASTICIZED POLYVINYL CHLORIDE (PVC) PIPE WITH RUBBER RING TYPE PUSH-ON JOINTS WITH SIMILAR FITTINGS. PIPE SHALL BE LABELED AS TO MATERIAL, PRESSURE, SIZE, SERVICE, MANUFACTURER'S DATE OF MANUFACTURE AND THE N.S.F. APPROVAL SEAL.

MANUFACTURING TOLERANCES FOR THE PIPE AND EXTERIORS AND FITTING INTERIORS SHALL BE NOT LESS THAN THE U.S. DEPARTMENT OF COMMERCE STANDARD CS 256-63, OR LATEST REVISION THEREOF. PIPE SHALL CONFORM TO ASTM D 2241 FOR STANDARD DIMENSION RATIOS.

MATERIAL USED TO PRODUCE THE PIPE, COUPLINGS AND FITTINGS SHALL CONFORM TO ASTM D 1784, TYPE 1, GRADE 1 (PVC 1120), CLASS 200.

THE COUPLING AND FITTINGS SHALL BE FURNISHED BY THE PIPE MANUFACTURER AND SHALL ACCOMMODATE THE PIPE FOR WHICH THEY ARE TO BE USED. THEY SHALL HAVE A MINIMUM PRESSURE RATING OF 200 PSI. THE COUPLING SHALL BE AN INTEGRAL PART OF THE PIPE BARREL. THE INSERTION DEPTH OF THE PIPE INTO THE COUPLING SHALL BE CONTROLLED BY AN INTERNAL PVC MECHANICAL STOP IN THE COUPLING WHICH WILL ALLOW FOR A THERMAL EXPANSION AND CONTRACTION. THE COUPLING SHALL ALLOW A MINIMUM OF HALF OF THE EXPANSION OR CONTRACTION OF EACH PIPE SECTION TO BE TAKEN UP AT EACH END OF THE PIPE. DEFLECTIONS AT COUPLINGS SHALL PERMIT NO EVIDENCE OF INFILTRATIONS, EXFILTRATIONS, CRACKING OR BREAKING.

PLASTIC PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS. PIPE SHALL NOT BE INSTALLED DIRECTLY ON ROCK, BUT IN SUCH AREAS AS SHALL BE CUSHIONED AS SPECIFIED IN THE DRAWINGS OR AS DIRECTED BY THE ENGINEER. NO STONE SHALL BE USED IN THE TRENCH BACKFILL BELOW THE DEPTH OF 12 INCHES ABOVE THE TOP OF THE BARREL OF THE PIPE. NO STONE WITH ITS GREATEST DIMENSION MORE THAN FOUR (4) INCHES WILL BE USED IN THE TRENCH BACKFILL.

NO TAPPING OR THREADING OF PLASTIC PIPE SHALL BE PERMITTED ON PIPE WITH A WALL THICKNESS LESS THAN SCHEDULE 120. MALE THREADED PVC PIPE OR FITTINGS OF ANY CLASS WILL NOT BE PERMITTED.

THE PLASTIC PIPE MUST BE HANDLED WITH REASONABLE CARE SO THAT IT IS NOT CRIMPED OR DAMAGED WHEN PLACED IN THE TRENCH.

B. MARKING OF PIPE
AS A MINIMUM THE PIPE SHALL HAVE THE FOLLOWING DATA APPLIED TO EACH PIECE:
1. NOMINAL SIZE
2. TYPE OF MATERIAL
3. SDR OR CLASS
4. MANUFACTURER
5. NSF (NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL)
6. QUALITY CONTROL CODE.

C. WORKING PRESSURES
WORKING PRESSURES AND SDR OF PIPE SHALL BE AS INDICATED ON THE DRAWINGS. SDR 21,200 PSI CLASS.

INSTALLATION

A. SAFETY
FOR THE SECURITY OR SAFETY OF PERSONS IN AND ADJACENT TO TRENCHES OR CONSTRUCTION OPERATIONS, THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA AND THE SAFETY REGULATIONS OF THE DEPARTMENT OF INDUSTRIAL RELATIONS OF THE STATE OF OHIO SHALL BE FOLLOWED WHEN SPECIFICALLY APPLICABLE, OR BY SIMILARITY OF OPERATION OR AS NECESSARY FOR ADEQUATE PROTECTION.

B. HANDLING
PIPE, FITTINGS, VALVES, HYDRANTS AND ACCESSORIES SHALL BE LOADED AND UNLOADED BY LIFTING WITH HOISTS OR SKIDDING SO AS TO AVOID SHOCK OR DAMAGE. UNDER NO CIRCUMSTANCES SHALL SUCH MATERIALS BE DROPPED. PIPE HANDLED ON SKIDWAYS SHALL NOT BE SKIDDED OR ROLLED AGAINST PIPE ALREADY ON THE GROUND.

C. TRENCH EXCAVATION (EARTH)
THE TRENCHES IN WHICH THE PIPE AND APPURTENANCES ARE TO BE CONSTRUCTED SHALL BE EXCAVATED IN ALL CASES IN SUCH A MANNER AND TO SUCH WIDTHS AS WILL ACCOMMODATE THE BUILDING OF THE STRUCTURES THEY ARE TO CONTAIN.

D. TRENCH EXCAVATION (ROCK)
WHERE EXCAVATION IS MADE IN ROCK OR BOULDERS, THE TRENCH SHALL BE EXCAVATED AT LEAST 6 INCHES BELOW THE PIPE FOR PIPE 24 INCHES IN DIAMETER OR LESS, AND 9 INCHES FOR PIPES LARGER THAN 24 INCHES IN DIAMETER. THE PIPE SHALL THEN BE BEDDED IN COMPACTED GRANULAR MATERIAL PLACED IN THE TRENCH BOTTOM IN ACCORDANCE WITH THE REQUIREMENTS FOR "FOUNDATION" CONTAINED HEREIN. BULKHEADS OF NATIVE CLAY SOIL SHALL BE PLACED ACROSS THE TRENCH AT 100 FT. INTERVALS TO RESIST THE UNNATURAL MOVEMENT OF GROUND WATER THROUGH THE GRANULAR MATERIAL. SAID BULKHEADS SHALL BE CAREFULLY COMPACTED AND SHALL EXTEND APPROXIMATELY 3 FT. IN A DIRECTION PARALLEL TO THE PIPE AND SHALL EXTEND FROM THE BOTTOM OF THE TRENCH TO A HEIGHT OF ONE-HALF FOOT ABOVE THE TOP OF THE PIPE.

E. ANCHORAGE
REACTION BACKING SHALL BE CLASS C CONCRETE. BACKING SHALL BE PLACED BETWEEN SOLID GROUND AND THE FITTING TO BE ANCHORED: THE AREA OF BEARING ON THE PIPE AND ON THE GROUND IN EACH INSTANCE SHALL BE THAT SHOWN ON THE TYPICAL DRAWINGS. THE BACKING SHALL BE SO PLACED THAT THE PIPE AND FITTING JOINTS WILL BE ACCESSIBLE FOR REPAIR.

STEEL TIE RODS, CLAMPS, OR RESTRAINED JOINT PIPE OF ADEQUATE STRENGTH TO PREVENT MOVEMENT MAY BE USED INSTEAD OF CONCRETE BACKING. STEEL TIE RODS OR ANCHORING FITTINGS SHALL BE USED TO CONNECT HYDRANT WATCH VALVES TO THE HYDRANT TEE AND MAY BE USED TO CONNECT THE HYDRANT TO THE WATCH VALVE. STEEL RODS OR CLAMPS SHALL BE PAINTED WITH THREE COATS OF AN APPROVED BITUMINOUS PAINT OR COAL TAR ENAMEL.

F. TIMBERING
UNSUPPORTED OPEN CUT FOR MAINS WILL NOT BE PERMITTED WHERE SOIL CONDITIONS NECESSITATE UNUSUALLY WIDE TRENCHES CAUSING DAMAGE TO STREET PAVEMENT, TREES, STRUCTURES, POLES, OR OTHER PRIVATE OR PUBLIC PROPERTY. DURING THE PROGRESS OF THE WORK, WHENEVER AND WHEREVER IT IS NECESSARY EITHER TO PROVIDE SAFE WORKING CONDITIONS OR TO AVOID THE DANGER OF DAMAGE TO EXISTING STRUCTURES OR STRUCTURES BEING BUILT, THE CONTRACTOR SHALL, AT HIS EXPENSE, SUPPORT THE SIDES OF THE EXCAVATION BY ADEQUATE AND SUITABLE SHEETING, SHORING, AND BRACING. SUCH TRENCH SUPPORT MATERIAL AND EQUIPMENT SHALL REMAIN IN PLACE UNTIL BACKFILLING OPERATIONS HAVE PROGRESSED TO THE POINT WHERE THE SUPPORTS MAY BE WITHDRAWN WITHOUT ENDANGERING STRUCTURES.

G. TRENCH BACKFILLING
ALL BACKFILL MATERIAL SHALL BE FREE FROM CINDERS, ASHES, REFUSE, VEGETABLE OR ORGANIC MATERIAL, BOULDERS, ROCKS OR OTHER MATERIAL WHICH IN THE OPINION OF THE ENGINEER IS UNSUITABLE.

H. TRENCH WIDTH
WIDTHS OF TRENCHES SHALL BE HELD TO A MINIMUM TO ACCOMMODATE THE PIPE, TIMBERING, ETC. AND IN NO EVENT WILL THE TRENCH WIDTH AT THE TOP OF THE PIPE EXCEED THE NOMINAL DIAMETER OF THE PIPE, PLUS 2 FT. ANY VARIATION THEREFROM SHOULD BE MADE ONLY WITH APPROVAL OF THE ENGINEER.

IF FOR ANY REASON, EXCESSIVE TRENCH WIDTH OCCURS AT DEPTHS WHICH WOULD IMPOSE CRITICAL LOADS ON THE PIPE, THE CONTRACTOR SHALL PROVIDE GRAVEL OR STONE BACKUP, EXTRA STRENGTH PIPE OR CONCRETE ENCASEMENT AS APPROVED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.

I. FOUNDATION
THE MAINS ARE TO BE BUILT ON GOOD FOUNDATION. SUCH MEASURES AS NECESSARY AND AS APPROVED BY THE ENGINEER SHALL BE USED TO PREVENT SETTLEMENT.

J. DRAINAGE
NO PIPE SHALL BE LAID IN WATER OR WHEN, IN THE OPINION OF THE ENGINEER, TRENCH CONDITIONS ARE UNSUITABLE.

K. PIPE LAYING
PROPER IMPLEMENTS, TOOLS AND FACILITIES SATISFACTORY TO THE ENGINEER SHALL BE PROVIDED AND USED BY THE CONTRACTOR FOR THE SAFE AND CONVENIENT PROSECUTION OF THE WORK. ALL PIPE, FITTINGS, VALVES AND HYDRANTS SHALL BE CAREFULLY LOWERED INTO THE TRENCH, PIECE BY PIECE, BY MEANS OF A DERRICK, ROPES OR OTHER SUITABLE TOOLS OR EQUIPMENT, IN SUCH MANNER AS TO PREVENT DAMAGE TO THE PIPE MATERIALS AND PROTECTIVE COATINGS AND LININGS. UNDER NO CIRCUMSTANCES SHALL PIPE MATERIALS BE DROPPED OR DUMPED INTO THE TRENCH.

EVERY PRECAUTION SHALL BE TAKEN TO PREVENT FOREIGN MATERIAL FROM ENTERING THE PIPE WHILE IT IS BEING PLACED IN THE LINE. DURING LAYING OPERATIONS, NO DEBRIS, TOOLS, CLOTHING OR OTHER MATERIALS SHALL BE PLACED IN THE PIPE.

AFTER PLACING A LENGTH OF PIPE IN THE TRENCH, THE SPIGOT END SHALL BE CENTERED IN THE BELL AND THE PIPE FORCED HOME AND BROUGHT TO CORRECT LINE AND GRADE. PIPE AND FITTINGS WHICH DO NOT ALLOW A SUFFICIENT AND UNIFORM SPACE FOR JOINTS SHALL BE REMOVED AND REPLACED WITH PIPE AND FITTINGS OF PROPER DIMENSIONS TO INSURE SUCH UNIFORM SPACE. PRECAUTIONS SHALL BE TAKEN TO PREVENT DIRT FROM ENTERING THE JOINT SPACE.

AT TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF PIPE SHALL BE CLOSED BY A WATER-TIGHT PLUG OR OTHER MEANS APPROVED BY THE ENGINEER. FURTHER, INSTALLATION OF ALL PIPES AND FITTINGS SHALL BE STRICTLY IN ACCORDANCE WITH THE LATEST REVISION OF THE "AWWA STANDARD FOR DISINFECTING WATER MAINS" (AWWA C6-1-68).

THE CUTTING OF PIPE FOR INSERTING VALVE, FITTINGS, OR CLOSURE PIECES SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER WITHOUT DAMAGE TO THE PIPE OR LINING, AND SO AS TO LEAVE A SMOOTH END AT RIGHT ANGLES TO THE AXIS OF THE PIPE. PIPE ENDS, WHERE INSERTED INTO GASKETS, MUST BE BEVELED.

PIPE SHALL BE LAID WITH BELL ENDS FACING IN THE DIRECTION OF LAYING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

DEFLECTIONS IN PIPE JOINTS IN EXCESS OF THE MANUFACTURER'S RECOMMENDATIONS WILL NOT BE PERMITTED.

L. LINE DETECTION
ALL PIPE SHALL HAVE A CONTINUOUS TRACER STRIP OF NON-DETERIORATING MATERIAL BURIED ON TOP OF IT, WHICH SHALL BE DETECTABLE BY A STANDARD TYPE OF METAL DETECTOR. BURIAL DEPTH SHALL RANGE BETWEEN 6"-10". MATERIAL MUST BE DETECTABLE EVEN THOUGH CONTINUITY IS INTERRUPTED. THE DETECTABLE MARKING TAPE SHALL BEAR THE PRINTED IDENTIFICATION "CAUTION: BURIED WATER LINE BELOW". WIDTH OF THE TAPE SHALL BE NOT LESS THAN 1 1/2". EXCEPTIONS ARE THROUGH CASINGS AS ARE NOTED OTHERWISE. (LINEGUARD TYPE II DETECTABLE TAPE, OR EQUAL).

M. PIPE AND FITTING JOINTING-PUSH-ON JOINTS
THE SURFACE WITH WHICH THE RUBBER GASKET COMES IN CONTACT SHALL BE CLEANED THOROUGHLY JUST PRIOR TO ASSEMBLY. THE GASKET SHALL THEN BE INSERTED INTO THE GROOVE IN THE BELL.

BEFORE STARTING JOINT ASSEMBLY, A LIBERAL COATING OF THE SPECIAL LUBRICANT KNOWN AS "WRA MEDLUBE" SHALL BE APPLIED TO THE PIPE ENDS. "WRA MEDLUBE" IS SYNTHESISED AS A WATER BASED LUBRICANT THAT PROVIDES EXCELLENT LUBRICITY, STRONG BACTERICIDAL ACTION AND PROTECTION AGAINST FREEZING. "WRA MEDLUBE" IS WATER SOLUABLE, NON-TOXIC AND DOES NOT PRODUCE ANY TASTE OR ODOR.

"WRA MEDLUBE" AS SPECIFIED HERE IS MANUFACTURED IN THE UNITED KINGDOM BY ISAAC BENTLY AND CO., LTD. AND DISTRIBUTED IN THE U.S. BY KINGSLEY AND KEITH CHEMICAL CORP., 560 SYLVAN AVENUE, ENGLEWOOD CLIFFS, N.J. 07632.

ONLY "WRA MEDLUBE" OR APPROVED EQUAL WILL BE ACCEPTED.

FROM THE CENTERLINE OF THE PIPE, FITTINGS AND APPURTENANCES, TO A DEPTH OF 1 FT. ABOVE THE TOP OF THE PIPE, THE TRENCH SHALL BE BACKFILLED WITH APPROVED MATERIAL BY HAND OR BY APPROVED MECHANICAL METHODS. THE CONTRACTOR SHALL USE SPECIAL CARE IN PLACING THIS PORTION OF THE BACKFILL SO AS TO AVOID INJURING OR MOVING THE PIPE.

FROM 1 FT. ABOVE THE PIPE TO THE GRADE SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN, THE TRENCH SHALL BE BACKFILLED BY HAND OR BY APPROVED MECHANICAL METHODS.

WHEN THE EXCAVATION IS MADE THROUGH PERMANENT PAVEMENTS, CURBS, DRIVEWAYS OR SIDEWALKS OR ADJACENT TO STRUCTURES, AND WHEN INDICATED ON THE PLANS OR ORDERED BY THE ENGINEER, THE ENTIRE BACKFILL OR PORTION THEREOF TO THE SUB-GRADE SHALL BE MADE WITH GRANULAR MATERIAL. IT IS THE INTENT TO BACKFILL THE STREET AND DRIVEWAY CROSSINGS THE ENTIRE DEPTH OF THE TRENCH WITH GRANULAR MATERIAL. GRANULAR BACKFILL SHALL BE PLACED IN THE MANNER PREVIOUSLY DESCRIBED UNDER "TRENCH BACKFILLING" WITH THE ADDITIONAL PROVISION THAT BULKHEADS OF NATIVE CLAY SOIL SHALL BE PLACED ACROSS THE TRENCH AT 100 FT. INTERVALS TO RESIST THE UNNATURAL MOVEMENT OF GROUND WATER THROUGH THE GRANULAR MATERIAL. SAID BULKHEADS SHALL BE CAREFULLY COMPACTED, SHALL EXTEND APPROXIMATELY THREE FT. IN A DIRECTION PARALLEL TO THE PIPE AND SHALL EXTEND FROM THE BOTTOM OF THE TRENCH TO A HEIGHT OF ONE-HALF FT. ABOVE THE TOP OF THE PIPE.

FHWA REGION	STATE	PROJECT	
5	OHIO		

34/66

GUERNSEY COUNTY
GUE-70-19.37

WATER LINE GENERAL NOTES

In backfilling trenches where granular backfill is not required or where other specific backfill requirements are not specified, the backfill shall be neatly rounded over the trench to a sufficient height to allow for settlement to grade after consolidation.

No backfill shall be made with frozen material and no fill shall be made where the material already in the trench is frozen.

The Contractor shall be responsible for the condition of the trenches for a period of one year from the date of the final estimate.

N. Granular Backfill
Trenches shall be backfilled with granular material where indicated on the drawings or as ordered by the Engineer.

Granular material may be gravel, crushed slag, or crushed stone requirements of Section 310.02, State of Ohio, Department of Highway Construction and Material Specifications, or other well-graded granular material approved by the Engineer.

The material shall be placed in layers of approximately 6 inches in thickness and compacted to the satisfaction of the Engineer.

Payment for all of the above shall be included in the Unit Price Bid for Item 814, New Water Mains and Service Branches.

TESTING AND CHLORINATION - CERTIFICATION

A. Hydrostatic Tests
A hydrostatic test for PVC pipe will be carried out, to the same requirements as a hydrostatic test for Cast Iron or Ductile Iron Pipe as required in Section 13 of the AWWA Standard C 600, or a hydrostatic test for Asbestos-Cement Pipe as required in Section 19 of the AWWA Standard C 603, to the whole or individual valved-off sections of the mains either before or after the trench is backfilled, as the Engineer may direct. The pressure during the test shall be equal to the rated strength of the pipe. The duration of each pressure test shall be at least two (2) hours. The Contractor shall furnish guages, all materials, make all taps required, and furnish a pump, piping, other equipment, and all necessary assistance for conducting the tests.

If there are any indications of leaks under this pressure test, the Contractor shall locate them at his cost and expense. Any cracked or defective pipe, fittings, valves, joints, or other appurtenances discovered in consequence of this pressure test shall be removed and replaced by the Contractor with sound material, at his cost and expense, and the test shall be repeated until satisfactory to the Engineer.

A test shall be made to determine the quantity of water lost by leakage under the specified test pressure as provided in Section 13 for Cast Iron or Ductile Iron Pipe, or Section 19 for Asbestos-Cement Pipe of the Standard AWWA Specifications above referred to. The leakage shall not exceed the AWWA Standard or 10 gallons per inch diameter per mile of pipe for 24 hours, whichever is less.

Before applying the specified pressure, all air shall be expelled from the pipe. To accomplish this, taps shall be made by the Contractor at points of highest elevation or as required. Taps shall be of the sizes as shown on the plans or as directed by the Engineer.

Should any test of combined sections of pipe laid, disclose leakage greater than that specified, or if individual sections show leakage greater than the specified limit, the Contractor shall, at his own expense, locate and repair the leaks until the leakage is within the specified allowance.

Leakage is defined as the quantity of water to be supplied into the newly laid pipe or any valved section of it, necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled.

B. Chlorination of Completed Pipe Line
The completed pipe lime will be chlorinated by the Contractor under the direction of the Engineer. The Contractor will furnish the chlorine and the equipment necessary to introduce the chlorine into the chlorination tap. All other labor, materials and equipment required will be furnished by the Contractor. The time and section of line to be chlorinated shall be approved by the Engineer.

Strict adherence to the "AWWA Standard for Disinfecting Water Mains", (AWWA C601-68) shall be accomplished. Major areas of concern under the above standard are (1) Protection of new pipe sections at the construction site, (2) Restriction on the type of joint packing used (3) Preliminary flushing of pipe sections, (4) pipe disinfection, (5) final flushing, and (6) bacteriological testing.

Each unit of completed water supply lines and distribution system shall be thoroughly sterilized with chlorine before it is placed in operation. The amount of chlorine applied shall be such as to provide a dosage of not less than fifty (50) parts per million. The chlorination materials shall be introduced to the water supply lines and/or distribution systems in a manner approved by the Engineer. Following a contact period of not less than eight (8) hours, the heavily chlorinated water shall be flushed from the system with clean water until the residual chlorine contact is no greater than two-tenths (0.2) P.P.M. All valves in water lines being disinfected shall be opened and closed several times during the eight (8) hour period.

C. Certification
The Contractor shall furnish a sworn statement certifying that all the required have been made and that the pipe and fittings comply with the requirements specified above.

After chlorination and flushing, the Contractor must secure and obtain satisfactory bacteriological samples and results of the water from the public health agency having jurisdiction. The satisfactory report must be submitted to the owner or the Engineer before authorization of domestic water consumption. Disinfection (chlorination) procedure as outlined above, must continue until satisfactory results are obtained.

D. Valves
All valves shall be I.B.B.M., AWWA Double Disc Parallel Seats, 150 pounds minimum working pressure, 300 pound test pressure, non-rising stem, left hand open. Valves shall have mechanical joint PVC ends unless otherwise designated on the plans or approved by the Engineer.

E. Valve Boxes
Unless otherwise directed each valve shall be equipped with a valve box as manufactured by Mueller Co., 5 1/4" 3 piece, screw type, or approved equal. Covers shall be marked "Water".

Payment for all of the above shall be included in the Unit Price Bid for Item 814, New Water Mains and Service Branches, *Unless Noted Otherwise.*

3. WATER MAIN DESIGN DETAILS
Reaction backing as shown on the plans shall be used for both Ductile Iron Pipe and Poly-Vinyl Chloride and shall be included for payment under Item 814.

4. PIPE JACKING UNDER I-70
At some time during the jacking of the encasement pipe under I-70, the Contractor may need to open a pit in the center of the median, Permission must be obtained from the Engineer, in writing, before any work is started.

No work access from I-70 will be granted to the Contractor during the construction of this project except to construct the above referenced median pit.

5. ELEVATION DATUM
The benchmarks have been established from datum obtained from the GUE-40-17.37 existing plans.

6. MAINTAINING TRAFFIC
Two-way, one lane traffic shall be maintained during the hours of 9:00 A.M. to 4:00 P.M. on County Roads 73 and 670, and Township Road 74. All lanes shall be opened at all other times. Access to all adjoining properties shall be maintained at all times.

Traffic shall be maintained at all times without interruption on Interstate Route No. 70.

All traffic control devices shall be furnished, erected, maintained and removed by the Contractor in accordance with the "Ohio Manual of Traffic Control Devices for Construction and Maintenance Operations", copies of which are available at the Ohio Department of Transportation, Bureau of Traffic, 25 South Front Street, Columbus, Ohio 43215. Cost to be included under Item 614.

7. EXISTING PIPES, GUARDRAIL & DITCHES
All existing tile, drains, guardrails, etc. which are damaged, removed or destroyed, shall be repaired, rebuilt or replaced by the Contractor in a satisfactory manner. Where existing guardrail is damaged, removed or destroyed, temporary guardrail shall be required until the permanent guardrail is repaired, rebuilt or replaced. All drainage ditches and structures shall be restored to existing condition and grade. Cost of the above shall be included under Item 814 except where specified on plans, guardrail will be replaced under Item 606 and removed under Item 202.

8. EXISTING PAVEMENT AND SIDEWALK
Limits of payment for replacement of pavement shall be as shown on Sheets No. 39-43. All pavement damaged beyond the limits of payment described herein shall be replaced by the Contractor at no cost to the State. The replacement pavement type shall be as shown on the plans.

9. SAFETY
The Contractor shall perform all work in accordance with the applicable Federal, State, and Local safety requirements.

10. EXPOSE
The Contractor shall expose the utility or structure indicated sufficiently in advance of laying the proposed water main in order to verify the proposed location. Cost to be included in Unit Price Bid for Item 814.

11. TREE PRESERVATION
All trees and monuments located within the right-of-way limits, whether shown or not shown on the drawing are to be preserved, unless approval to remove is given in writing by the Engineer. Beyond the right-of-way line, all trees, saplings, crops or grass shall be preserved. No trimming of any trees will be permitted, unless approval to trim is given in writing by the Engineer. The Contractor will be responsible for any claim for damage to trees, saplings, crops or grasses which may occur as a result of his construction operations in cases where such trees, etc., are required or designated to be preserved. All damage to signs, fences, hedges, flowers, shrubbery, etc. as a result of the construction shall be restored in like kind and character to the approval of the Engineer. Cost shall be included in Unit Price Bid for Item 814.

12. MAIL SERVICE
The Contractor shall be responsible for maintaining mail service in the construction area. Prior to distrubing any mail boxes, the Contractor shall contact the Postal Authorities and shall temporarily relocate mail boxes in accordance with the requirements thereof. The Contractor shall restore mail boxes to their original condition and location. Cost of same shall be included in the Unit Price Bid for Item 814.

13. TRENCHES AND EXCAVATION
All trenches and excavation shall be backfilled directly behind the point of the last open pipe by end of each day's operation.

14. GRAVEL BERMS
Wherever gravel berms are disturbed, the Contractor shall restore the berms with 6 inches Item 304 aggregate base, a prime coat Item 408 applied at the rate of 0.40 Gal./S.Y., and a seal coat Item 409 consisting of 0.30 gallon bituminous material 702.09, RT-8 or RT-9 or 702.02, MC-800 or MC-3000 per square yard and 25 pounds of No. 8 aggregate per square yard. The width of berm replacement shall be limited to a width of four (4) feet, or as determined by the Engineer. The cost of this work shall be included in the Unit Price Bid for Items 304, 408, and 409.

15. TEMPORARY PAVEMENT REPLACEMENT
All streets and driveways cut by the Contractor shall be provided with temporary pavement on the same day that the original pavement is cut. In general, unless otherwise ordered by the Engineer, County Roads 73, 670 and Township Road 74 shall be provided with temporary pavement replacement which shall consist of 2 inches Item 404 asphalt concrete and 6 inches of Item 304 aggregate base. Private driveways and parking areas shall be temporarily replaced with a minimum of 6 inches of crushed stone or gravel as per Item 304. Payment will be made at contract Unit Price for Items 304 and 404.

16. PERMANENT PAVEMENT REPLACEMENT
Permanent pavement replacement shall be, when ordered by the Engineer, as indicated on Sheets 39-43 & as follows:

Type A shall consist of 7 inches
Item 301 bituminous aggregate base and 2 1/2 inches
Item 404 asphalt concrete

Type B shall consist of 6 inches
Item 304 aggregate base as per plan

Payment will be made at contract Unit Price for Items 301, 304, and 404.

WATER LINE GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO		

GUERNSEY COUNTY
GUE - 70 - 19.37

35
66

17. ROAD CROSSINGS

AT THE FOLLOWING LOCATIONS, OPEN CUT METHOD OF TRENCH CONSTRUCTION SHALL BE USED:

(A) COUNTY ROAD 73 (11+20 TO 11+40)
(B) COUNTY ROAD 73 (12+83 TO 13+03)
(C) COUNTY ROAD 670 (27+00 TO 27+30)
(D) COUNTY ROAD 670 (28+30 TO 28+60)
(E) COUNTY ROAD 670 (66+05 TO 66+30)
(F) COUNTY ROAD 670 (70+95 TO 71+20)
(G) TOWNSHIP ROAD 74 (75+75 TO 76+30)

AT ALL CROSSINGS OF COUNTY ROAD 670, THE WATERLINE SHALL BE PLACED IN STEEL PIPE SLEEVES.

PRIOR APPROVAL OF THE CONTRACTOR'S WORK PLAN BY THE ENGINEER SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF THE WORK ON THESE CROSSINGS.

WATER LINE GENERAL SUMMARY

ESTIMATED PROJECT QUANTITIES

Rd. No.	Ref.	Item	Total	Unit	DESCRIPTION
69	1	301	25	C.Y.	Bituminous Aggregate Base
✓	2	304	860	C.Y.	Aggregate Base*
70	3	404	16	C.Y.	Asphalt Concrete, AC-20 (Driveway)
71	5	408	1,980	Gal.	Bituminous Prime Coat
72	6	409	989	C.Y.	Seal Coat Cover Aggregate No. 8
73	7	409	1,490	Gal.	Seal Coat Bituminous Material
74	8	Special	190	L.F.	Steel Casing Pipe A.S.T.M. A-53, Grade B (16"O.D. x 0.500"Wall Thickness) Jacked
75	9	Special	120	L.F.	Steel Casing Pipe A.S.T.M. A-53, Grade B (16"O.D. x 0.500" Wall Thickness) Open Cut
76	10	604	2	Each	Meter Pit Including Meter With Remote Meter Registering Device And All Valves and Fittings Inside The Pit
77	11	606	300	L.F.	Guardrail, Type 5
✓	12	659	8,570	S.Y.	Seeding & Mulching*
✓	13	659	0.75	Ton	Commercial Fertilizer*
78	14	659	5.75	Ton	Agricultural Liming
79	14A	814	5	Each	Air Release Assembly, Complete
80	15	814	690	L.F.	6" New Water Main, D.I.P., As Per Plan
81	16	814	11,920	L.F.	6" New Water Main, P.V.C., As Per Plan
82	17	814	110	L.F.	4" New Water Main, D.I.P, As Per Plan
83	18	814	60	L.F.	2" Copper Water Main, Type K Hard
84	19	814	1	Each	2" Valve & Box, As Per Plan
85	21	814	1	Each	4" Valve & Box
86	22	814	11	Each	6" Valve & Box
87	23	814	1	Each	Fire Hydrants, 4"

* These Items carried to General Summary Shl. No. 5

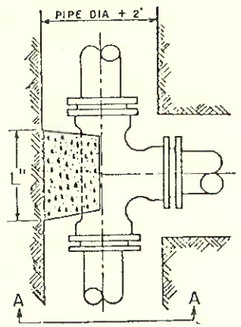
NOTE: ABOVE ESTIMATED QUANTITIES TO BE INCLUDED WITH GENERAL CONTRACT BID ITEMS ON SHEET NO. 6.

	STATE		
5	OHIO		

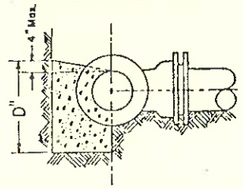
36
66

GUERNSEY COUNTY
GUE - 70 - 19.37

PLAN VIEW



SECTION A-A



NOTES

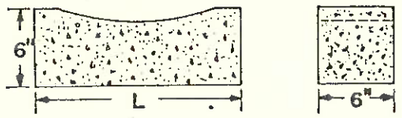
1. BACKER DESIGNED FOR 3000 PSF SOIL BEARING.
2. CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH.
3. PROVIDE CLEARANCE FOR REMOVAL OF BOLTS.

RUN	3"			4"			6"		
	L"	D"	Vc.f.	L"	D"	Vc.f.	L"	D"	Vc.f.
3"	12	5	0.5						
4"	10	6	0.5	11	8	0.8			
6"	9	7	0.5	11	8	0.8	18	12	1.9

STANDARD DETAIL
BACKING FOR TEES

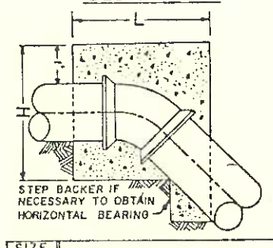
SIZE OF VALVE	L	VOLUME CU-FT
3"	15"	0.31
4"	16"	0.33
6"	17"	0.36
8"	20"	0.42
12"	24"	0.50
16"	30"	0.63

GATE VALVES

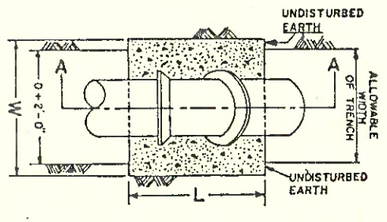


CONCRETE VALVE SUPPORTS
STANDARD DETAIL

SECTION A-A



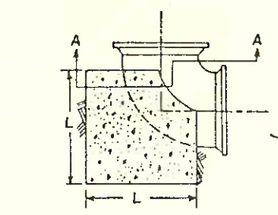
PLAN VIEW



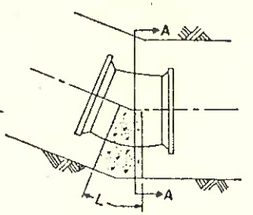
SIZE OF PIPE	DEGREE OF BEND															
	11.25°				22.5°				45°				90°			
	L"	W"	H"	Vol.	L"	W"	H"	Vol.	L"	W"	H"	Vol.	L"	W"	H"	Vol.
3"	12	18	12	1.5	13	25	16	3.0	18	30	19	5.9	25	30	24	10.4
4"	12	24	16	2.6	16	30	18	5.0	22	36	24	11.0	27	48	25	18.7
6"	12	48	18	6.0	15	43	36	13.4	30	55	24	22.9	37	54	36	41.6

NOTE: 1. VOLUMES GIVEN IN CUBIC FEET.
2. BACKER TO BE CENTERED HORIZONTALLY ON BEND.
3. STEEL WILL BE USED AS REQUIRED BY THE ENGINEER.

STANDARD DETAIL
BACKING FOR VERTICAL BENDS
(OVER BENDS ONLY)

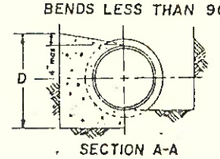


90° BENDS



BENDS LESS THAN 90°

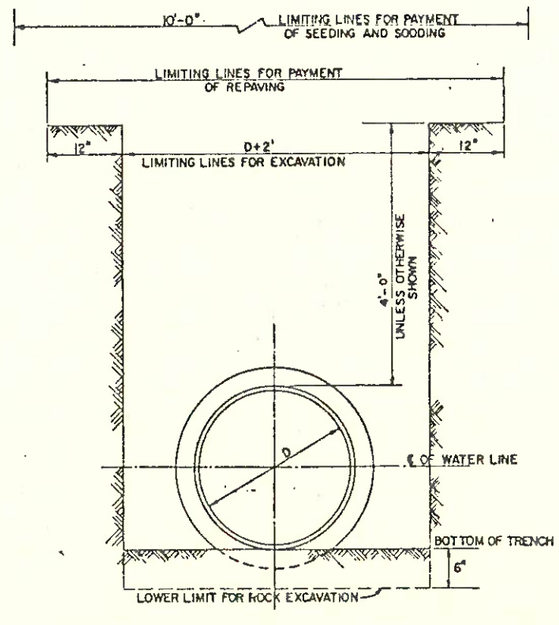
NOTES:
1. BACKER DESIGNED FOR 3000 PSF SOIL BEARING.
2. CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH.



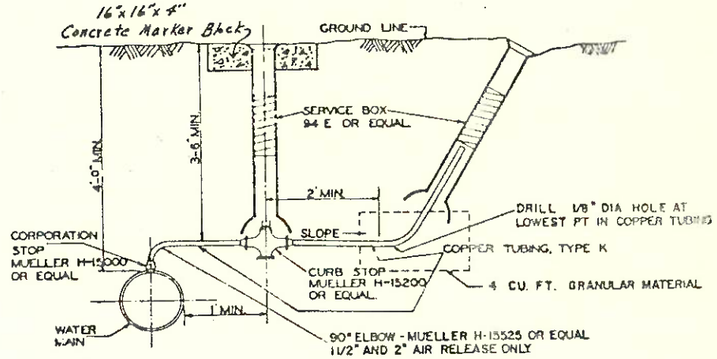
SECTION A-A

SIZE OF PIPE	DEGREE OF BEND											
	11¼°			22½°			45°			90°		
	L"	D"	V c.f.	L"	D"	V c.f.	L"	D"	V c.f.	L"	D"	V c.f.
3"	4	3	0.1	6	4	0.2	10	4	0.3	10	4	0.3
4"	5	4	0.2	9	5	0.4	14	5	0.6	14	5	0.6
6"	8	6	0.5	12	7	0.7	20	8	1.4	18	9	1.7

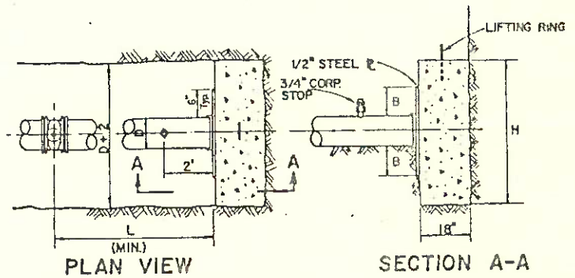
STANDARD DETAIL
BACKING FOR BENDS
HORIZONTAL AND VERTICAL SAG



STANDARD DETAIL
TYPICAL TRENCH



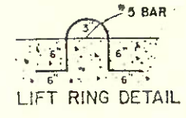
STANDARD DETAIL
TYPICAL AIR RELEASE
¾" THRU 2"



PLAN VIEW

SECTION A-A

PIPE DIAMETER	H	B	L	VOLUME CU-FT
3"	5"	1"	10'	1.43
4"	6"	1"	10'	1.76
6"	8"	1"	10'	2.52
8"	12"	1"	10'	4.00
12"	23"	3"	18'	8.64
16"	37"	3"	18'	15.39



LIFT RING DETAIL

NOTE:
1. BACKER DESIGNED FOR 3000 PSF SOIL BEARING
2. END OF PIPE CAPPED OR PLUGGED.
3. GREASE STEEL PLATE WHERE IN CONTACT WITH CONCRETE BACKER.
4. PLACE CONCRETE AGAINST UNDISTURBED SOIL.
5. THOROUGHLY COMPACT BACKFILL BETWEEN VALVE AND END OF PIPE.

STANDARD DETAIL
THRUST BLOCK DETAIL
END OF PIPE

FHWA REGION	STATE	PROJECT	
5	OHIO		

37/66

GUERNSEY COUNTY
GUE - 70 - 19.37

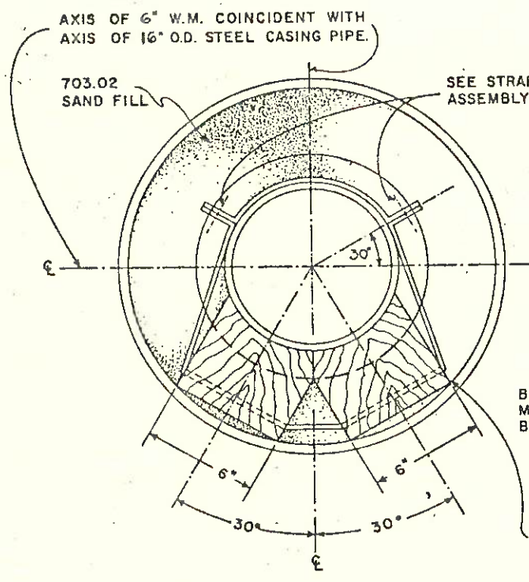
WATER LINE ENCASEMENT

PAYMENT: THE 14-INCH O.D., 16-INCH O.D., 20-INCH O.D. A.S.T.M. A-53 GRADE "B" STEEL CASING PIPE, INCLUDING THE ROUGH MILLED OAK BLOCKING; 1/4-INCH STEEL STRAPS WITH BOLTS, NUTS AND WASHER ASSEMBLIES; MASONRY BULKHEADS AND 703.02 AGGREGATE SAND FILL, SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR "ITEM 603-14-INCH O.D.-0.438 INCH WALL, 16-INCH O.D.-0.500 INCH WALL, 20-INCH-0.594 INCH WALL CONDUIT, GRADE "B" STEEL CASING PIPE, JACKED AND BORED IN PLACE AS PER PLAN," WHICH PRICE AND PAYMENT SHALL INCLUDE THE FURNISHING OF ALL LABOR, MATERIALS, SMALL TOOLS AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK. THE STEEL CASING PIPE SECTIONS SHALL BE JOINED BY BUTT WELDING IN ACCORDANCE WITH 513.17.

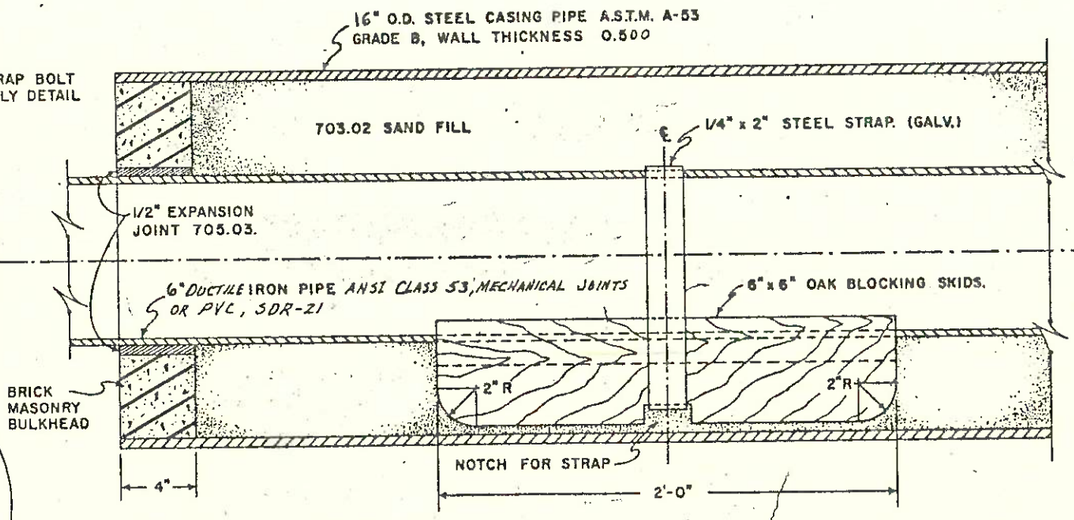
PAYMENT WILL BE MADE FOR THE SPECIFIED WATER MAINS INSTALLED IN CONDUIT GRADE "B" STEEL CASING PIPE AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR "ITEM 814-NEW WATER MAIN," *DUCTILE* IRON PIPE *AWWA C-151/ANSI A-21.51 CLASS 53, MECHANICAL JOINTS OR PVC ASTM D-2241, SDR-21*

NOTE: NO TRENCH EXCAVATION OR EQUIPMENT SHALL BE CLOSER THAN 10-FEET TO THE EDGE OF PAVEMENT. TRENCHES SHALL BE ADEQUATELY SUPPORTED.

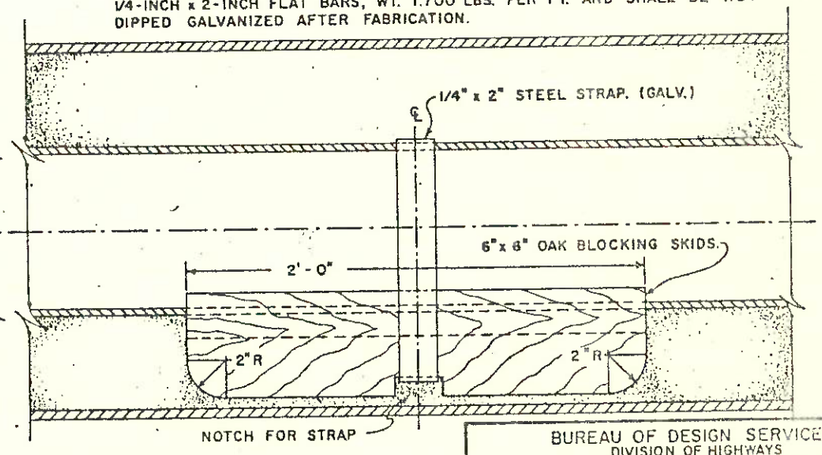
ALL STRAPS SHALL BE FABRICATED FROM AISI NO. C-1018, COLD FINISHED 1/4-INCH x 2-INCH FLAT BARS, WT. 1.700 LBS. PER FT. AND SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.

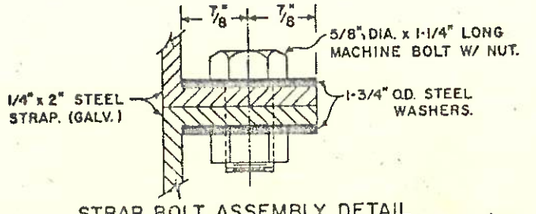


CROSS SECTION
SCALE 3" = 1'-0"



LONGITUDINAL ELEVATION
SCALE 3" = 1'-0"





STRAP BOLT ASSEMBLY DETAIL
FULL SCALE

BUREAU OF DESIGN SERVICES
DIVISION OF HIGHWAYS
OHIO DEPARTMENT OF TRANSPORTATION

WATER LINE ENCASEMENT

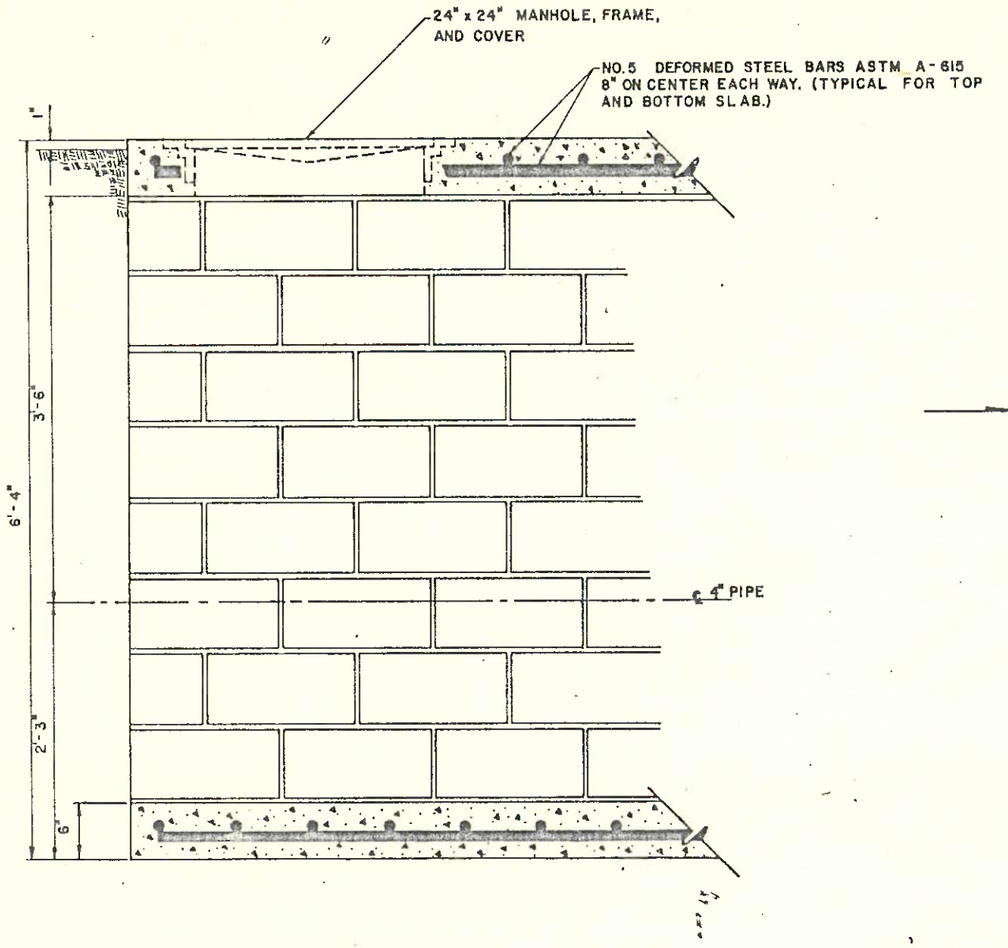
DATE

METER PIT DETAIL

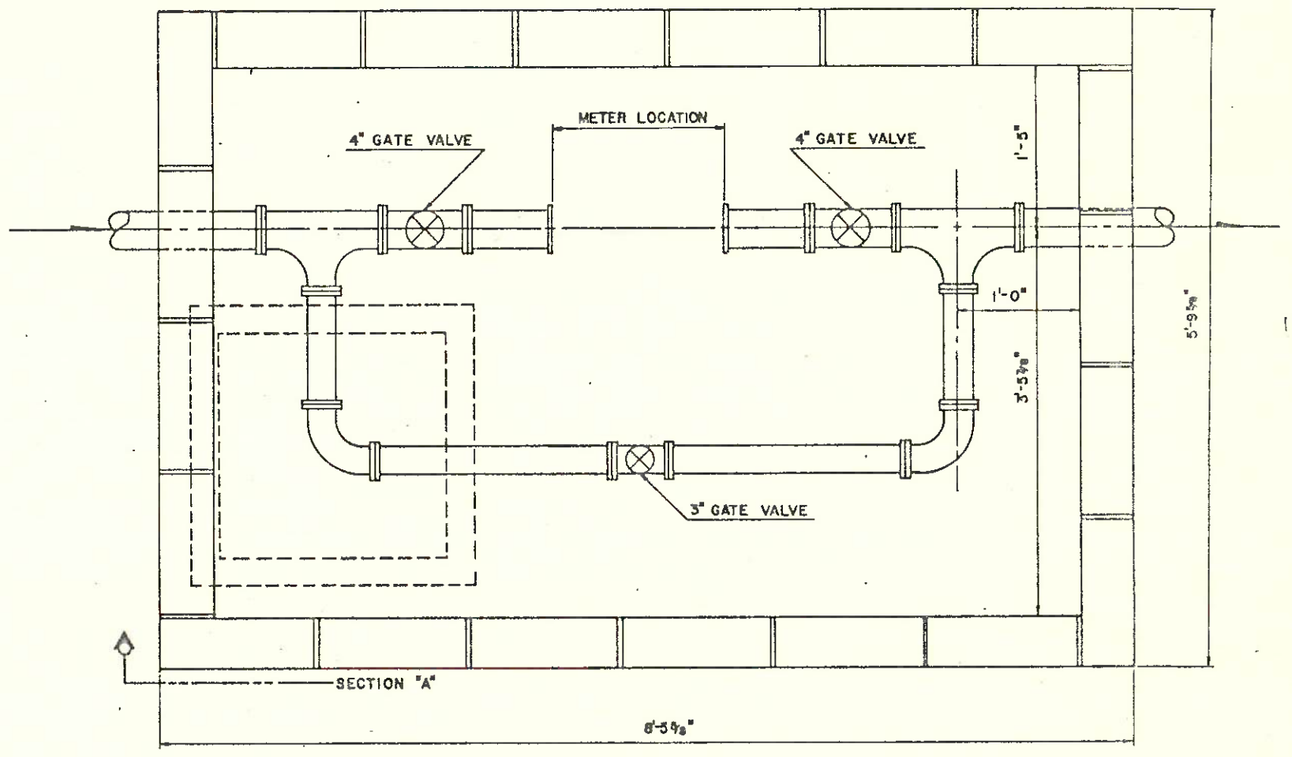
FHWA REGION	STATE	PROJECT	
5	OHIO		

38/66

GUERNSEY COUNTY
GUE - 70 - 19.37



SECTION "A"



PLAN

NOTE:
1. STEP RUNGS SHALL BE REQUIRED IN THE METER PIT, SPACED AT EACH 8" BLOCK JOINT AS REQUIRED.
2. A FOUR INCH (4"), SINGLE REGISTER MAGNETIC (SRM) COMPOUND WATER METER, AS MANUFACTURED BY ROCKWELL, OR APPROVED EQUAL, SHALL BE FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR.

FHWA	STATE	PROJECT	
5	OHIO		

39
66

GUERNSEY COUNTY
GUE-70-19.37

BEGIN WORK
STA. 9+88.68
Connect to Ex. 5" W.L.

Begin Prop. 6" W.M. Connect to Ex. 5" W.L. w/5"x6" Reducer, See Detail this sheet.

Ex. 5" W.L.
Ex. 5" Valve

B.M. #1
M.S. in ⌀
El. 967.02

Pavt. Repl. Type A

Sta. 11+11.97 W.M.
Defl. 89°05'15" Rt.

15" Clay Pipe

R/W

Asphalt

Pavt. Repl. Type A

Ex. 2" W.L.

Ex. 2" W.L.

B.M. #4
M.S. in ⌀
El. 981.73

CURVE DATA
℄ WATER MAIN

PI = 27+78.42
Δ = 9°42'26" Lt.
Dc = 11°00'00"
R = 520.67'
L = 88.25'
T = 44.23'
E = 1.87'

CURVE DATA
℄ WATER MAIN

PI = 29+91.62
Δ = 34°57'30" Lt.
Dc = 14°00'00"
R = 409.26'
L = 249.70'
T = 128.67'
E = 19.81'

Co. Rd. 75

Asphalt

48" Steel Pipe

Co. Rd. 75

Concrete

Pavt. Repl. Type A

Sta. 13+76.41 W.M.
Defl. 34°52'13" Lt.

I-70 Westbound

I-70 Eastbound

6" Valve

Ex. 6" UD

15" Ex. 6" UD

Ex. 6" UD

Ex. 6" UD

Sta. 17+23.11 W.M.
Defl. 65°28'27" Lt.

Prop. 6" W.L. (190 L.F.) To be Jacked

Prop. 6" Duct Pipe Mech. Fastened Cement Lined

Sta. 26+93.96 W.M.
Defl. 44°53'16" Rt.

Sta. 26+60 W.M.
6" Anchor Outlet
6" Valve
6" Plug

℄ PROP. 6" W.M.

6" Valve
6" Valve
6" Plug

6"-6"-6" Tee

H-6 Δ

Direct Buried Telephone Cable (1)

H-7 Δ

H-6A Δ

H-6B

H-5 Δ

Direct Buried Telephone Cable (1)

MATCH LINE 40+00

P.I. 51+12.45

P.I. 28+62.75
Defl. 47°44'10" Rt.

P.C. 27+54.13
Defl. 46°30'39" Lt.

P.T. 36+41.63

P.C. 32+22.63

12" C.M.P.
24" D.I.P.

Encasement Pipe (Steel)

Pavt. Repl. Type A

P.C. 22+62.91

P.T. 26+10.75

Encasement Pipe (Steel)

Pavt. Repl. Type A

Co. Rd. 47

EXPOSE

B.M. #3
M.S. in ⌀
El. 971.37

P.T. 28+22.44
Defl. 52°00'58" Lt.

CURVE DATA
℄ WATER MAIN

P.I. = 24+41.78
Δ = 24°55'57" Rt.
Dc = 7°15'00"
R = 790.29'
L = 343.44'
T = 174.47'
E = 19.03'

CURVE DATA
℄ WATER MAIN

P.I. = 34+36.21
Δ = 26°43'45" Rt.
Dc = 6°22'30"
R = 898.76'
L = 419.27'
T = 213.52'
E = 25.02'

B.M. #2
S.E. Bolt, End Base Plate of Bridge
El. 930.36

D.I.P. P.V.C.

EXPOSE

5'-9"x6'

Sta. 9+88.68 6" Valve

4'-5"x4'

22"

10"

10"

6" Meter

Ex. 5'-9"-6" Tee

Relocated 2" W.L.

Scale: ¼"=1'

Note: The existing 2" W.L. to be relocated around meter pit as required. Cost to be included with unit price bid for meter pit, as per plan, item 604.

Note: Extreme caution shall be exercised so as not to damage the existing R/W fence. Any cost of removing and re-creating, if necessary, shall be included in the cost per linear foot of item 814, 6" New Water Main, As per plan.

Pavement Replacement
Type A: 2½", Item 404, Asphalt Concrete
7", Item 301, Bituminous Aggregate Base
Type B: 6" Item 304, Aggregate Base

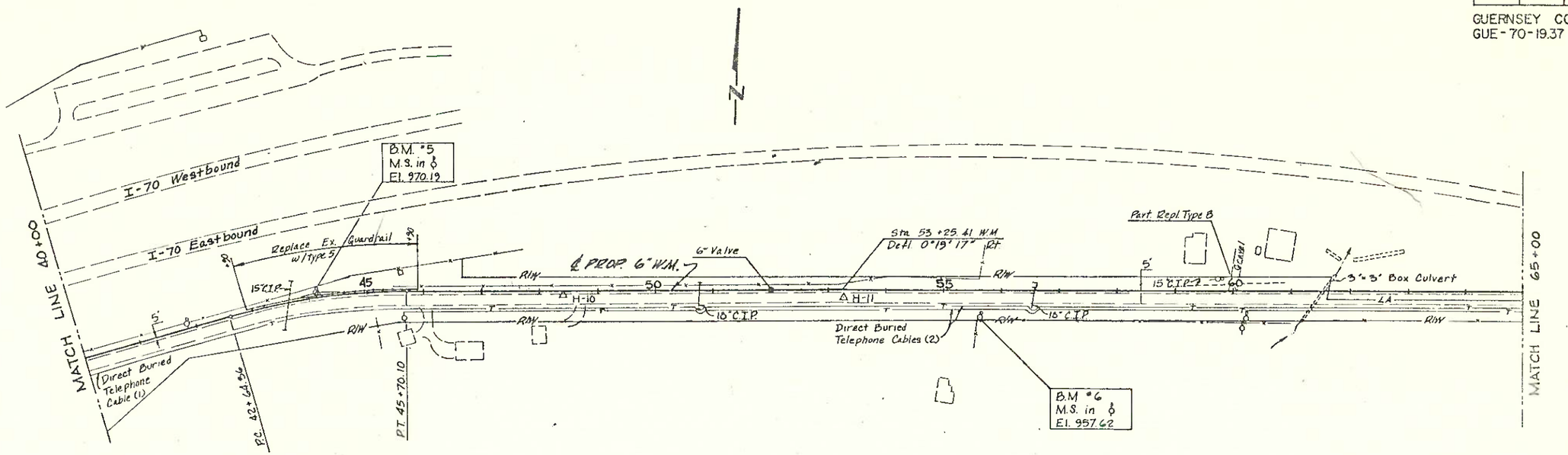
Top of meter pit El. 980.50
15" Clay (℄ 909.72')
1.5%
1.00%
Bottom slab 908.17
18" Steel (℄ 902.05')
-2.24%
+00.00 Brg. on Gr. ℄ El. 981.25
+00.00 Brg. on Gr. ℄ El. 959.49
+40.00 Brg. on Gr. ℄ El. 956.00
+30.00 Brg. on Gr. ℄ El. 952.00
+52.00 Brg. on Gr. ℄ El. 950.01
1 Air Release
+50.00 Brg. on Gr. ℄ El. 956.25
1.40%
0.00%
190' Jacking
℄ PROP 6" W.M.
27"12 CA (℄ 963.02')
6" TELE (℄ UNK)
1.50%
0.00%
24" DIP (℄ 952.20')
+20.00 Brg. on Gr. ℄ El. 957.50
+00.00 Brg. on Gr. ℄ El. 955.50
+00.00 Brg. on Gr. ℄ El. 955.50
+40.00 Brg. on Gr. ℄ El. 979.00
+00.00 Brg. on Gr. ℄ El. 991.25
1 Air Release
+00.00 Brg. on Gr. ℄ El. 991.25
0.00%
5.32%
1.40%
1.60%
1000
990
980
970
960
950
10
15
20
25
30
35

HIGHWAY FEDERAL AID SHEET
PLATE 4-SINGLE PLAN AND CROSS SECTION-FULL LINE

FHWA	STATE	PROJECT	
5	OHIO		

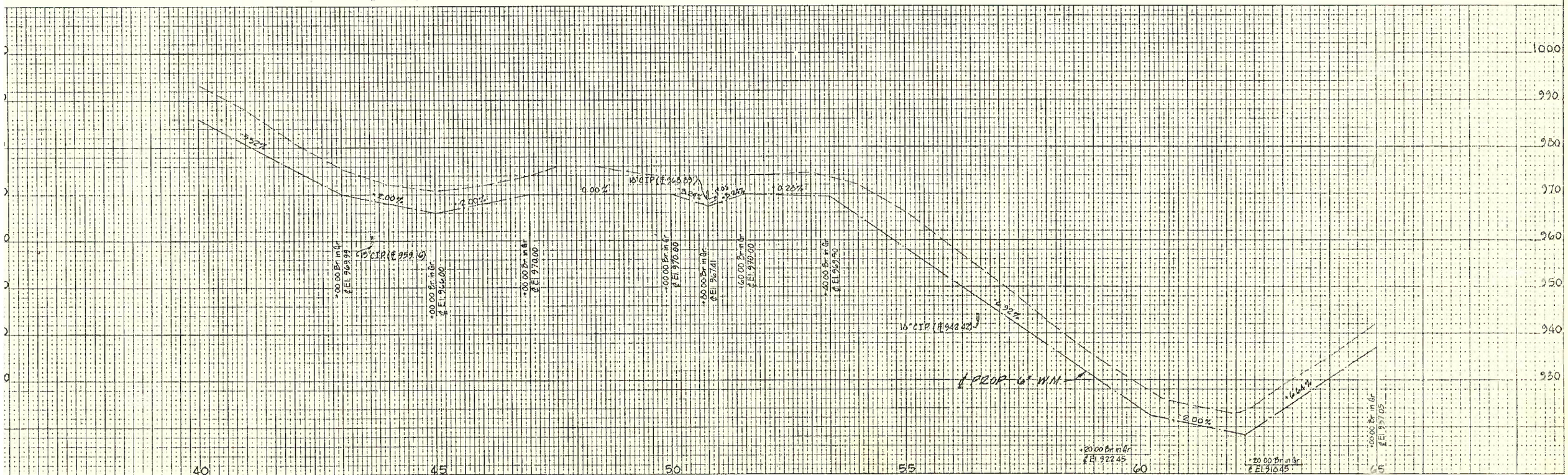
40
66

GUERNSEY COUNTY
GUE-70-19.37



CURVE DATA
℄ WATER MAIN

PT = 44+16.24
Δ = 16° 02' 31" Rt.
Dc = 5° 14' 49"
R = 1092.00'
L = 305.74'
T = 155.88'
E = 10.79'

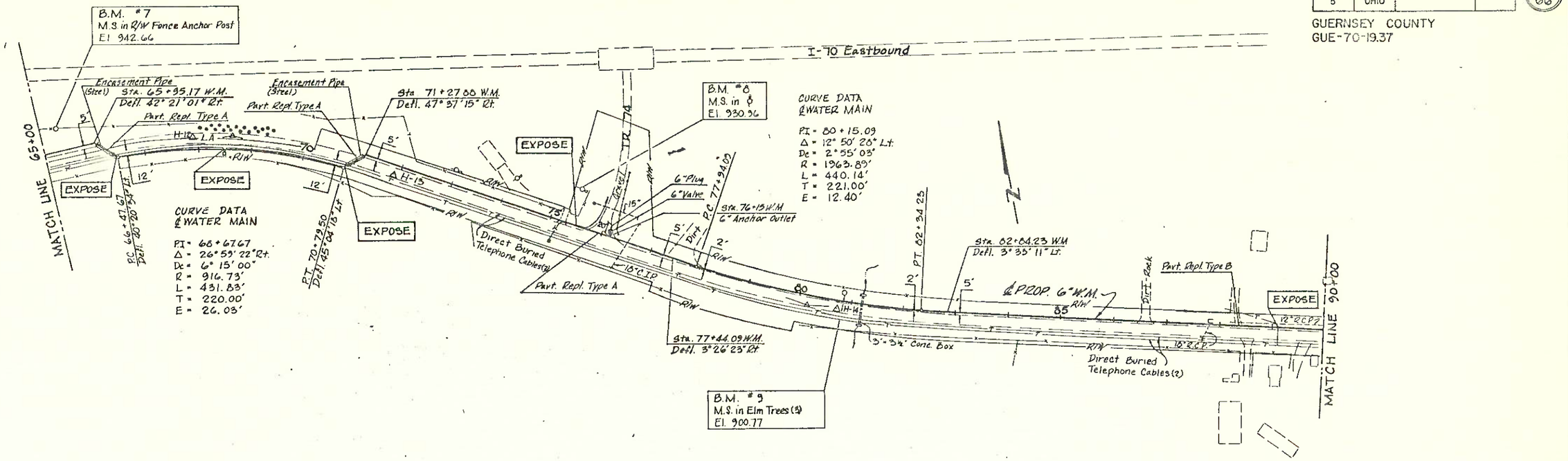


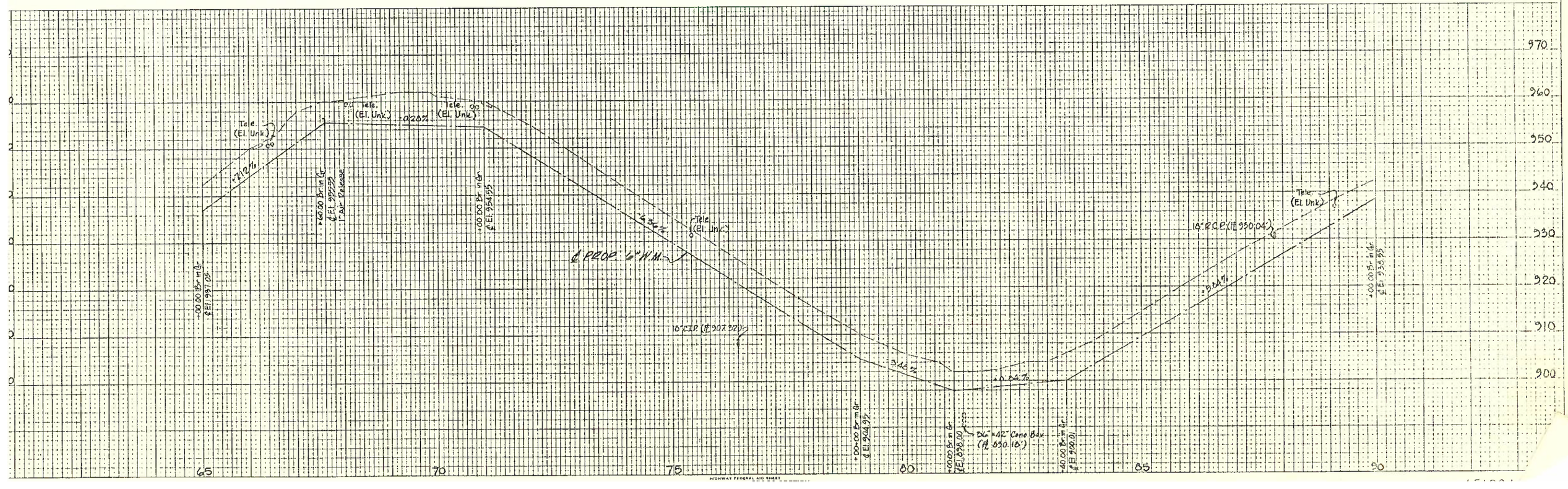
HIGHWAY FEDERAL AID SHEET
PLATE 4-SINGLE PLAN AND CROSS SECTION-FULL LINE

FHWA	STATE	PROJECT	
5	OHIO		

41
66

GUERNSEY COUNTY
GUE-70-19.37





FHWA	STATE	PROJECT	
5	OHIO		

42/66

GUERNSEY COUNTY
GUE-70-19.37

I-70 Eastbound

CURVE DATA
℄ WATER MAIN

PI = 92+48.52
Δ = 9° 59' 45" Lt.
Dc = 4° 00' 00"
R = 1432.39'
L = 249.90'
T = 125.27'
E = 5.47'

CURVE DATA
℄ WATER MAIN

PI = 101+25.16
Δ = 16° 46' 00" Lt.
Dc = 3° 15' 00"
R = 1762.95'
L = 515.90'
T = 259.81'
E = 19.04'

Part Repl. Type B
MATCH LINE 90+00
EXPOSE
P.C. 91+23.25
B.M. #10
M.S. in Corner Post
El. 952.50
P.T. 93+73.15
Sta. 95+00 W.M.
6" Anchor outlet
Part Repl. Type B
6" Valve
6" Plug
EXPOSE
P.C. 96+65.35
Defl. 6° 11' 48" Rt.
Part Repl. Type B
Direct Buried Telephone Cables (2)
18" D.I.P.
P.T. 103+81.25
Sta. 105+05.37 W.M.
Defl. 2° 42' 05" Lt.
℄ PROP. 6" W.M.
Direct Buried Telephone Cables (2)
15" Conc.
24" R.C.P.
4'x6' Conc. Box
MATCH LINE 115+00
B.M. #11
M.S. in Oak (28" Dia.)
El. 900.43
B.M. #12
M.S. in Fence Post
El. 898.95
B.M. #13
U.S.G.S. No. P-64 (El. 900.07)
Fld. El. 898.94
T.R. 74

+0.52%
-3.40%
Tee (El. Unk.)
18" DIP (E 910.76)
℄ PROP. 6" W.M.
0.00%
-1.00%
15" Conc. (E 892.85)
-1.60%
-2.00%
-0.80%
24" R.C.P. (E 885.60)
4'x6' Conc. Box (E 893.11)
940
930
920
910
900
890
90
95
100
105
115

FHWA	STATE	PROJECT	
5	OHIO		

43

GUERNSEY COUNTY
GUE - 70 - 19.37

B.M. # 2A
N.W. Cor. C.B.L.P.
El. 934.88

I-70 Eastbound

LA

H-13Δ

END WORK
STA. 136+82.25
Connect to bldg.

MATCH LINE 115+00

Sta. 115 + 26.20 W.M.
Defl. 0° 16' 46" Rt.

Pavt. Repl. Type B

Gravel

5'

120

125

0

R/W

Ex. 1" W.L.

EXPOSE

130

℄ PROP. 6" W.M.

135

5'

Δ H-17

H-16Δ

3'-3' x 3' Conc. Box

Direct Buried
Telephone Cables (2)

10" C.I.

Pavt. Repl. Type B

Approx. Location
(From Hwy. Dept.)

Sta. 135+19.41 W.M.
Defl. 90° 05' 28" Lt.

6" Valve
6" Plug
* Conc. Thrust Block

Ex. 6" D.I.

P.V.C.

D.I.P.

Sta. 136+47.02 W.M.
Defl. 68° 01' 42" Lt.

Δ H-20

L/A

B.M. # 14
M.S. in Fence Post
El. 948.10

B.M. # 15
M.S. in ℄
El. 952.69

See meter detail on sheet 36

Sta. 135+29.5
4" Valve

Sta. 135+24.2
4" Valve

8" Bypass

Sta. 135+27
8" Valve

Scale 1" = 1'

Sta. 136+47.02
2" Tee

Sta. 136+27.75
4" x 2" Reducer

D.I.P.

Sta. 136+25.00
4" x 4" Tee for Hyd.

Fire Hyd. 5"
Pumper 2½"
2½ Conn.

Scale 1" = 1'

Note: Extreme caution shall be exercised so as not to damage the existing R/W fence. Any cost of removing and re-erecting, if necessary, shall be included in the cost per linear foot of item 814, 4" New Water Main, as per plan.

* See Detail Sheet 36

Top of water pit
El. 952.50

Bottom Slab
El. 946.17

Tele. (El. Unk.)

W.L. (El. Unk.)

Elec. (El. Unk.)

6" Clay (El. 929.95)

℄ FLOOR. 6" W.M.

+6.00%

+3.40%

+3.08%

+1.84%

0.00%

-6.00%

-5.40%

-50.00 Br. in Gr.
℄ El. 899.65

-50.00 Br. in Gr.
℄ El. 920.65

-50.00 Br. in Gr.
℄ El. 943.95

-50.00 Br. in Gr.
℄ El. 946.65
1" Air Release

Sta. 135+19.41
℄ El. 948.95

Sta. 135+45
℄ El. 937.51

Sta. 136+47.02
℄ El. 932.02

Sta. 136+82.25
℄ El. 934.00

3'-3' Conc. Box
(℄ El. 876.25)

950
940
930
920
910
900
890

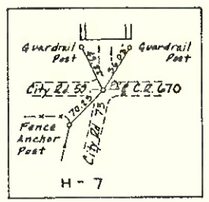
115
120
125
130
135

HIGHWAY FEDERAL AID SHEET

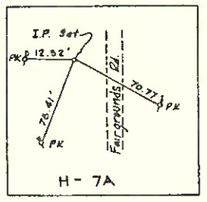
FHWA REGION	STATE	PROJECT	
5	OHIO		

44/66

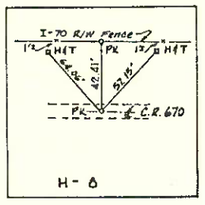
GUERNSEY COUNTY
GUE-70-19.37



H - 7



H - 7A



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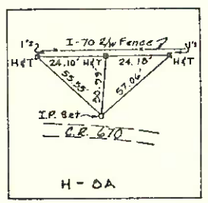

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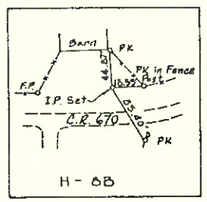
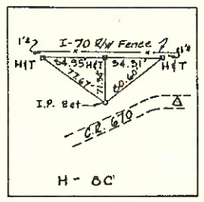
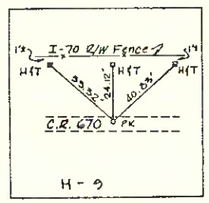


H - 8B



H - 8C



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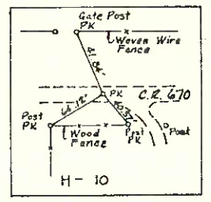

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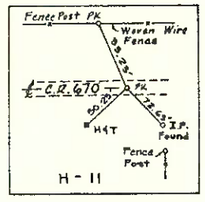

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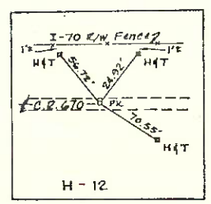

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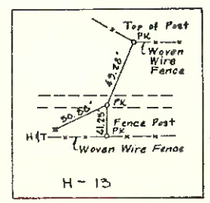
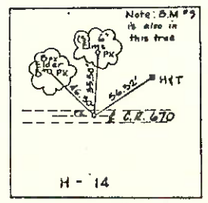
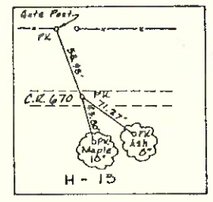


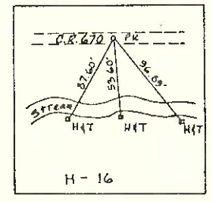
H - 13



H - 14



H - 15



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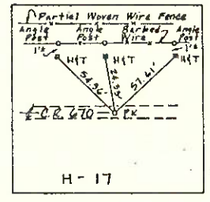

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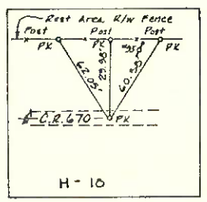
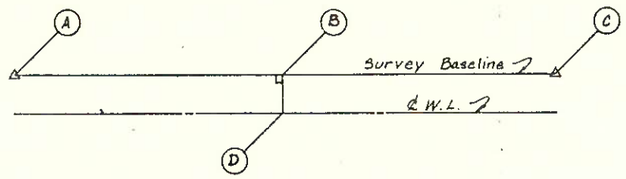


H - 18

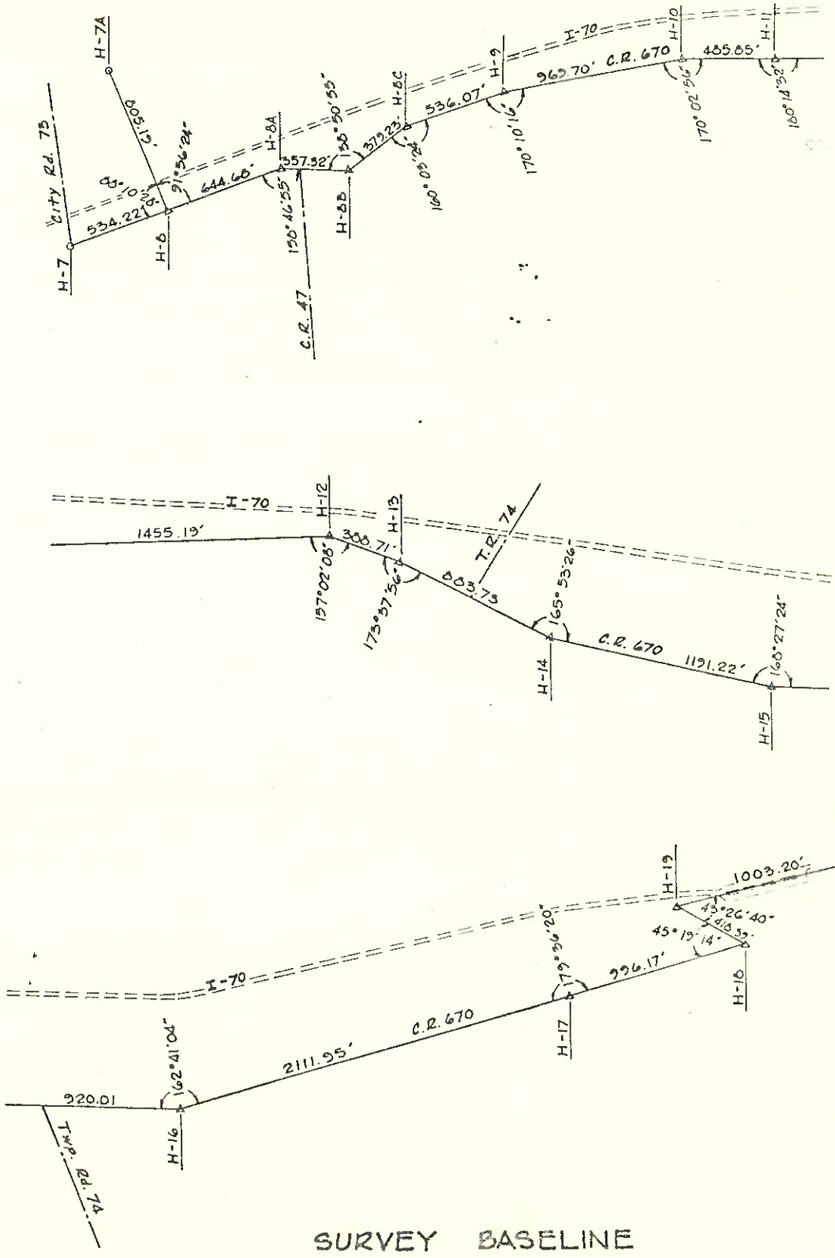
REFERENCES



WATER MAIN OFFSETS

STATIONS			DISTANCES		SIDE
A	C	D	A - B	B - D	B to D
H-7A	H-8	9+58.66	132.98	143.39	Lt.
H-7A	H-8	11+11.97	225.17	20.92	Lt.
H-7A	H-8	15+76.41	438.93	176.57	Lt.
H-8	H-7	17+23.11	184.28	13.75	Rt.
H-8	H-8A	22+67.31	359.69	15.54	Lt.
H-8A	H-8	24+41.78	110.32	16.23	Rt.
H-8B	H-8A	26+10.75	291.88	35.30	Lt.
H-8B	H-8A	26+93.98	208.80	40.32	Lt.
H-8B	H-8A	27+54.19	182.07	70.36	Lt.
H-8B	H-8A	27+78.42	137.86	71.78	Lt.
H-8B	H-8A	28+22.44	94.05	65.71	Lt.
H-8B	H-8A	28+62.75	73.91	30.79	Lt.
H-8B	H-8C	29+91.62	36.95	36.76	Rt.
H-8B	H-8C	31+12.45	165.09	23.07	Rt.
H-8B	H-8C	32+22.69	275.11	15.96	Rt.
H-9	H-8C	34+36.21	432.85	35.08	Rt.
H-9	H-8C	36+41.96	219.64	23.52	Rt.
H-9	H-10	42+64.36	399.48	58.83	Lt.
H-10	H-9	44+18.24	417.40	76.86	Rt.
H-10	H-9	45+70.10	265.59	51.96	Rt.
H-11	H-12	53+25.41	00.63	13.75	Lt.
H-12	H-11	65+95.17	184.06	26.17	Rt.
H-12	H-11	66+47.67	145.72	8.82	Lt.
H-13	H-12	68+67.67	314.77	15.72	Rt.
H-13	H-12	70+73.50	95.78	5.26	Lt.
H-13	H-12	71+27.88	58.50	25.56	Rt.
H-14	H-13	77+44.09	328.75	1.16	Rt.
H-14	H-13	77+94.09	278.95	3.28	Lt.
H-14	H-13	80+15.09	54.50	23.29	Lt.
H-14	H-15	82+34.23	163.50	4.02	Lt.
H-14	H-15	82+84.23	213.	7.01	Lt.
H-15	H-14	91+23.25	138.70	5.23	Rt.
H-15	H-14	92+48.52	13.44	6.86	Rt.
H-15	H-16	93+73.15	113.45	7.67	Lt.
H-16	H-15	98+65.35	314.41	0.81	Rt.
H-16	H-15	101+25.16	54.64	3.71	Lt.
H-16	H-17	103+81.25	206.45	5.72	Lt.
H-16	H-17	105+05.57	330.68	1.12	Lt.
H-17	H-16	115+26.20	760.69	11.44	Rt.
H-18	H-20	135+19.41	226.17	70.21	Rt.
H-18	H-20	136+47.02	270.83	49.33	Rt.

SURVEY BASELINE



HORIZONTAL CONTROL - REFERENCES

GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

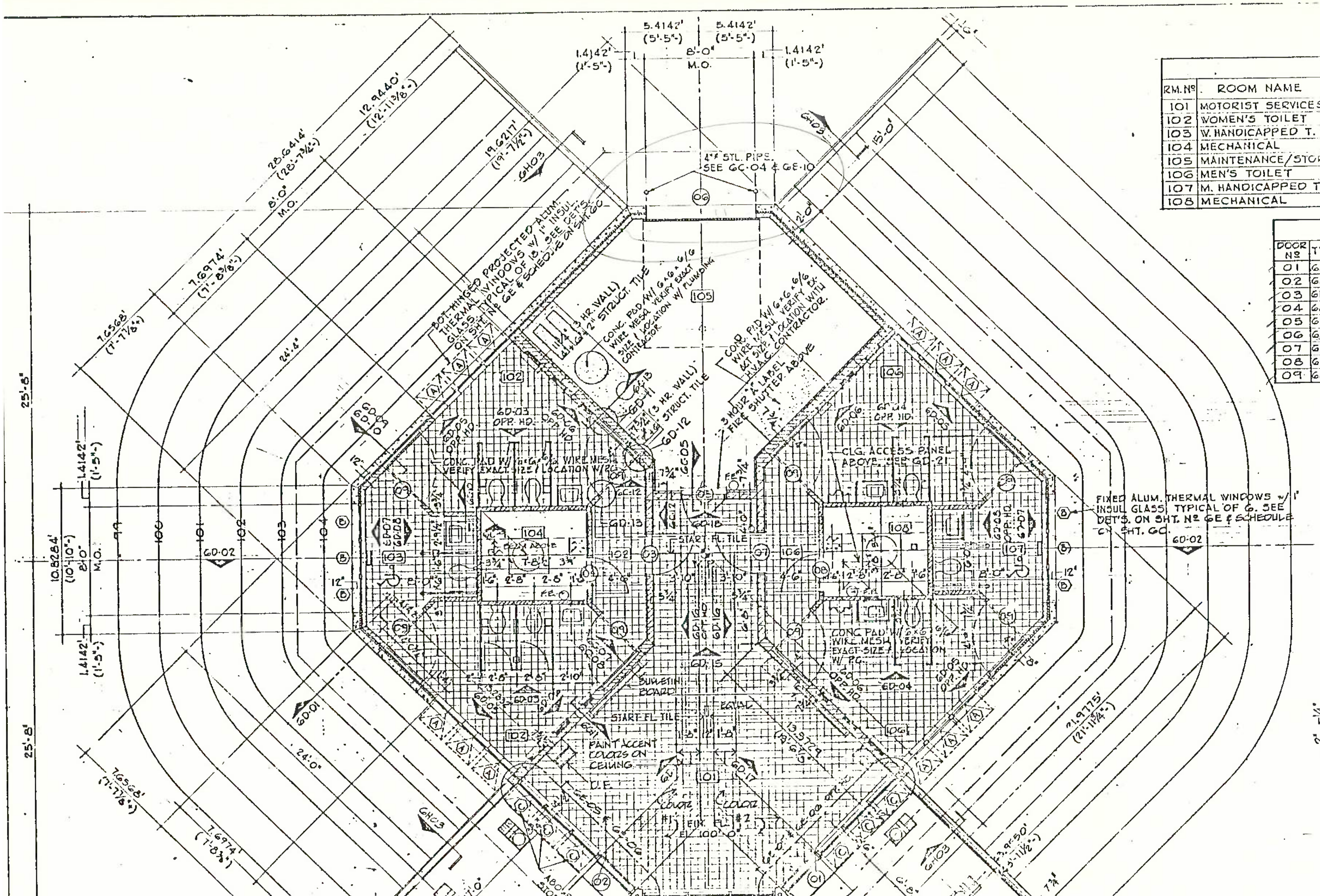
45/66

ROOM FINISH SCHEDULE

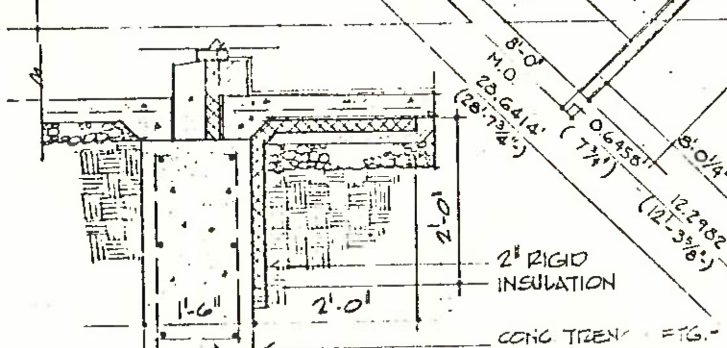
RM. Nº	ROOM NAME	FLOOR	BASE	WALLS	CEILING	CLG. HT.	REMARKS
101	MOTORIST SERVICES	QUARRY TILE 1	QUARRY TILE 2	GLAZED TILE	CONC. PAINTED	9'-1¼"	1. THIN-SET. 2. 5" COVE
102	WOMEN'S TOILET	Do	Do	Do	Do	Do	Do
103	W. HANDICAPPED T.	Do	Do	Do	Do	Do	Do
104	MECHANICAL	CONC. w/ HRDNR.	NONE	UNGLAZED TILE 1	Do	Do	1. PAINTED
105	MAINTENANCE/STOR.	Do	Do	Do	Do	Do	Do
106	MEN'S TOILET	QUARRY TILE 1	QUARRY TILE 2	GLAZED TILE	Do	Do	1. THIN-SET. 2. 5" COVE
107	M. HANDICAPPED T.	Do	Do	Do	Do	Do	Do
108	MECHANICAL	CONC. w/ HRDNR.	NONE	UNGLAZED TILE 1	Do	Do	1. PAINTED

DOOR SCHEDULE

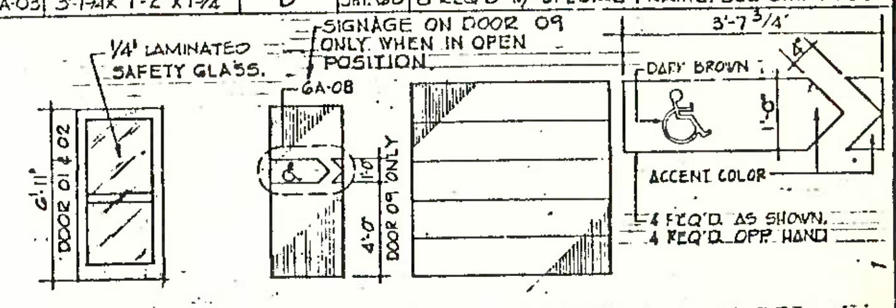
DOOR Nº	TYPE	SIZE	HARDWR.	JAMB DET.	REMARKS
01	6A-02	3'-5" x 6'-11" x 1¾"	A	6E-06	FURNISH W/NOMINAL 4½" HIGH CENTER CROSS RAIL
02	6A-02	3'-5" x 6'-11" x 1¾"	A	6E-06	FURNISH W/NOMINAL 4½" HIGH CENTER CROSS RAIL
03	6D-16	3'-0" x 6'-11" x 1¾"	B	6A-05	1 HR. "B" LABEL DOOR & FR. W/ V.P. SEE 6D-16
04	6A-03	2'-8" x 6'-11" x 1¾"	C	6A-06	
05	6A-03	3'-0" x 6'-11" x 1¾"	C	6A-07	3 HOUR "A" LABEL DOOR & FR. SEE 6C-05
06	6A-04	8'-2" x 8'-1" x 2"	—	6E-10	2" REGULAR CLEARANCE TRACK
07	6D-16	3'-0" x 6'-11" x 1¾"	B	6A-05	1 HR. "B" LABEL DOOR & FR. W/ V.P. SEE 6D-16
08	6A-03	2'-8" x 6'-11" x 1¾"	C	6A-06	
09	6A-03	3'-7¾" x 7'-2" x 1¾"	D	SHT. 6D	8 REQ'D w/ SPECIAL FRAME. SEE SHT. Nº 6D



6A-01 FLOOR PLAN
SCALE 1/4" = 1'-0"



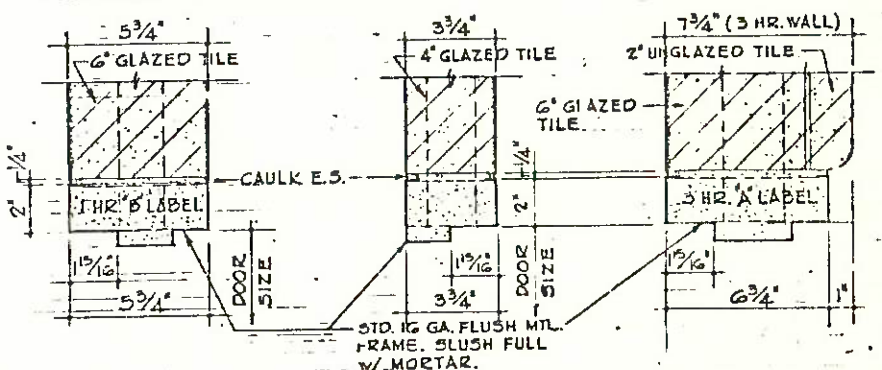
6A-08 INSULATION DETAIL WHERE EXTERIOR GRADE IS SAME AS FINISHED FLOOR - NO SCALE



WIDE STILE ALUMINUM — 6A-02
16 GA. FLUSH HOLLOW MTL. — 6A-03
24 GA. FLUSH STL. INSUL. OVERHEAD MOTOR OPER. — 6A-04

DOOR TYPES
NO SCALE

6A-08
UNCPD SIGNAGE DTL.
SCALE: 3/4" = 1'-0"



6A-05 6A-06 6A-07
DOOR JAMB FRAMING DETAILS - HEADS SIMILAR
SCALE 3" = 1'-0"

BUILDING USE AND OCCUPANCY INFORMATION

FIRST FLOOR USE, GROUP ---------- B
FIRE RATING HOURS ---------- 2
OCCUPANCY LOAD ---------- 49
FLOOR LIVE LOAD ---------- 100 P.S.F.

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS
9-26-84
12-13-84

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO. 6A

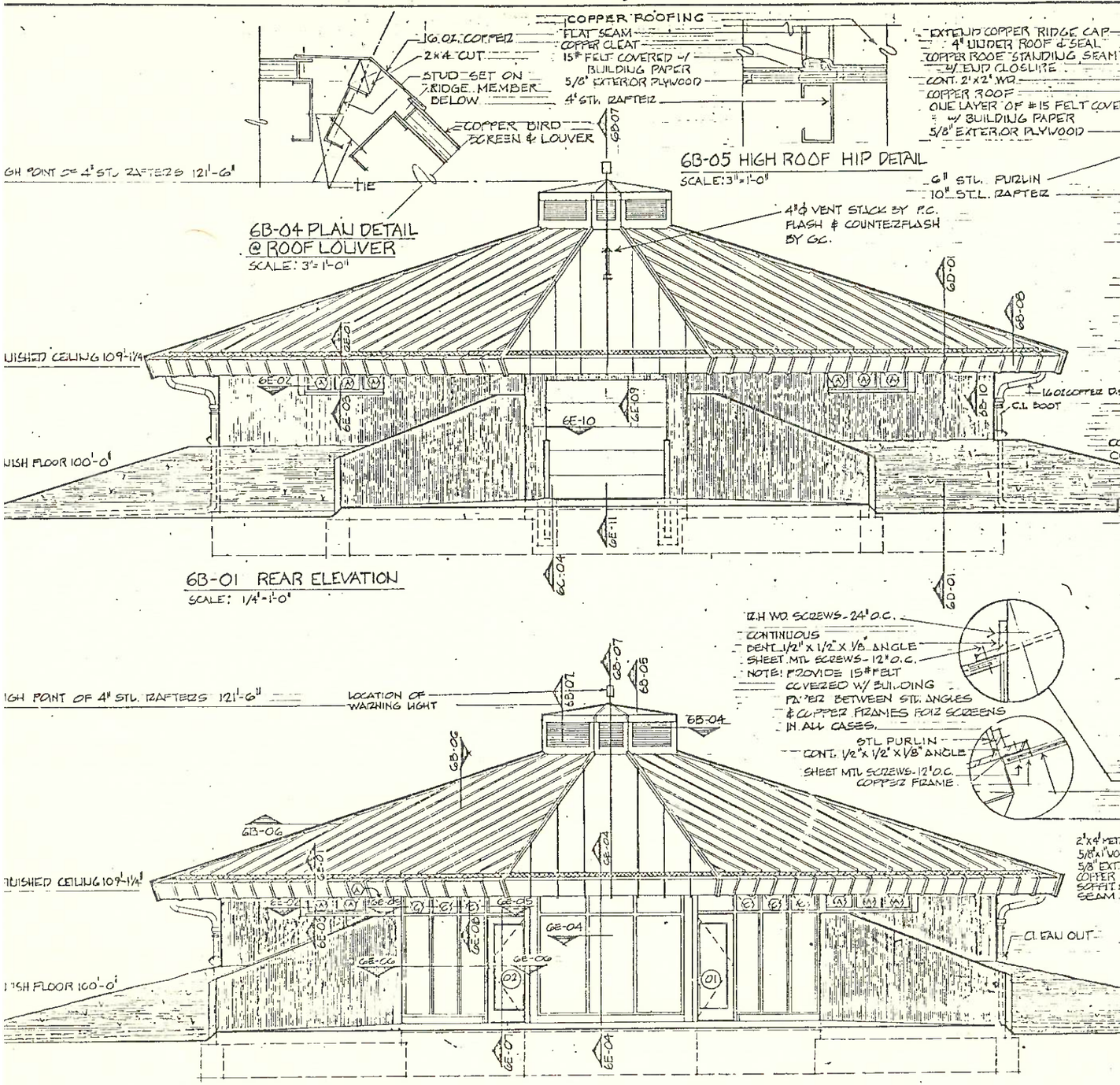
DATE

ARCHITECTS • WRIGHT / KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO
ENGINEERS • JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TECHNOLOGIES • BATTELLE / COLUMBUS LABORATORIES

GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

46/66

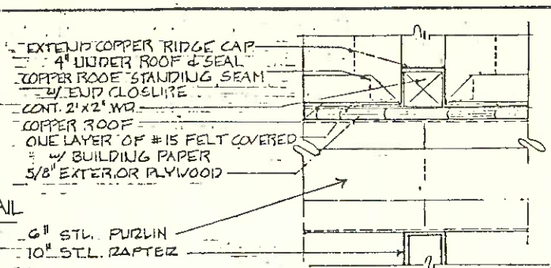


6B-04 PLAN DETAIL @ ROOF LOUVER

SCALE: 3"=1'-0"

6B-05 HIGH ROOF HIP DETAIL

SCALE: 3"=1'-0"



6B-06 LOUVER ROOF HIP DETAIL

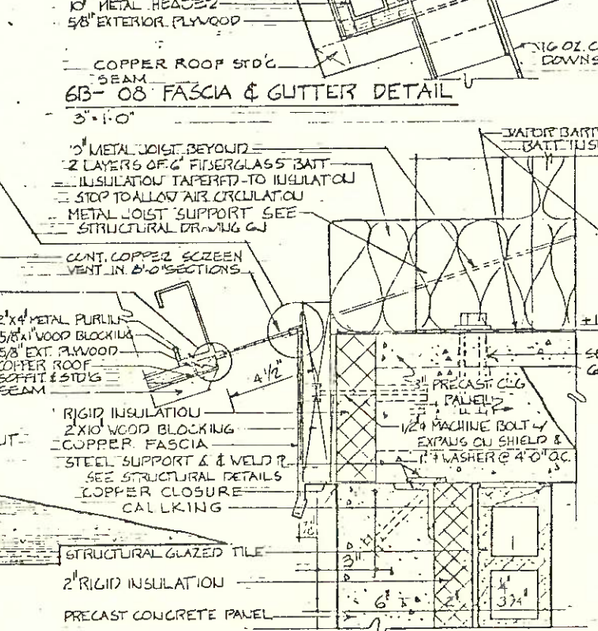
SCALE: 3"=1'-0"

6B-01 REAR ELEVATION

SCALE: 1/4"=1'-0"

6B-02 FRONT ELEVATION

SCALE: 1/4"=1'-0"



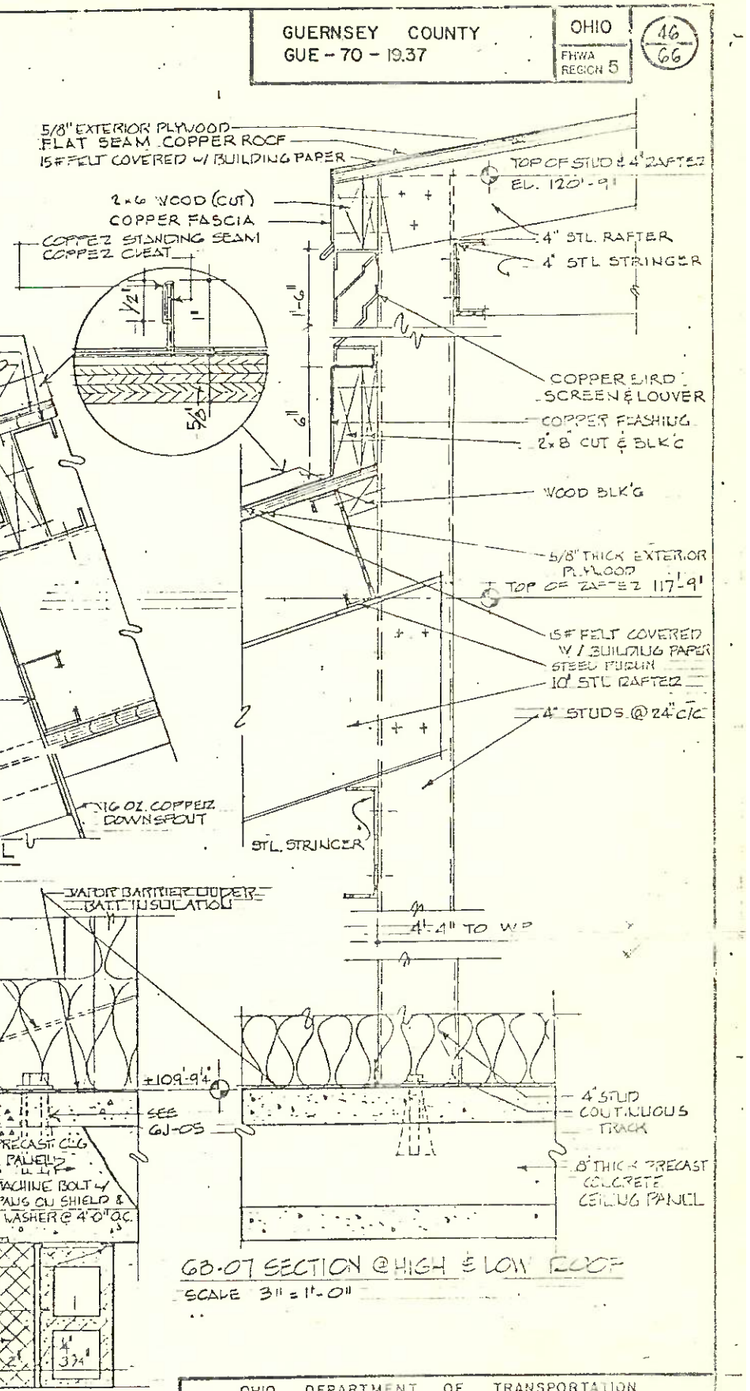
6B-08 FASCIA & GUTTER DETAIL

3"=1'-0"

6B-03 EAVE, JOIST SUPPORT & CEILING PANEL CONNECTION @ EXTERIOR WALL DETAIL

SCALE: 3"=1'-0"

NOTE: PAINT ANY MEMBERS VISIBLE THRU SCREEN VENT BLACK



6B-07 SECTION @ HIGH & LOW ROOF

SCALE 3"=1'-0"

W"=1' 2 0 2 4 6 8 10 SCALE FEET

¾"=1' 1 0 1 2 3 SCALE FEET

3"=1' 2 0 2 4 6 8 10 SCALE INCH

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO. 6B

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DATE

GUERNSEY COUNTY
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FHWA REGION 5

47
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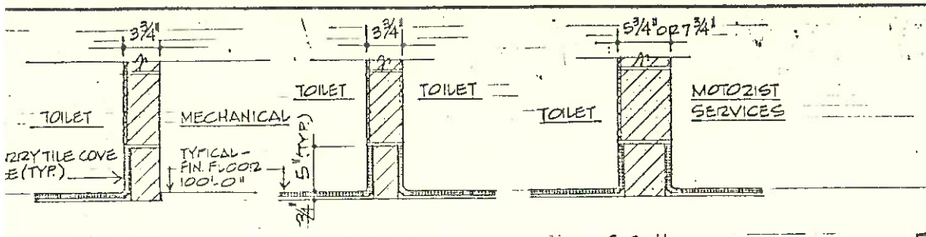
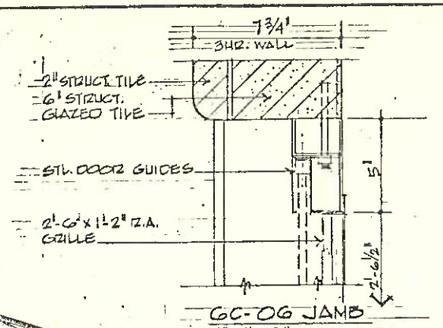


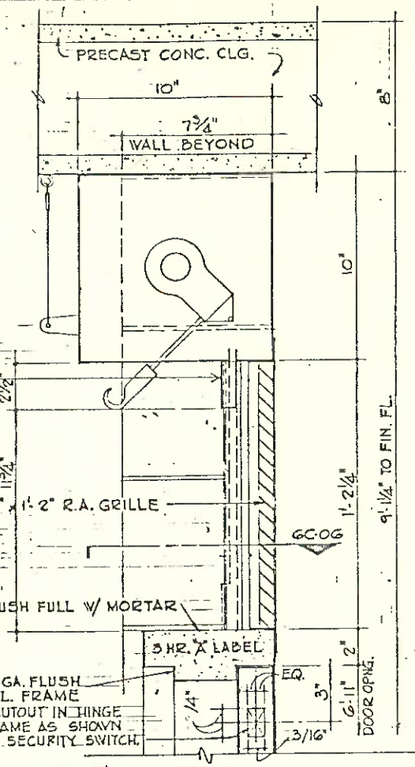
GC-09
BASE DETAILS
NO SCALE

GC-10

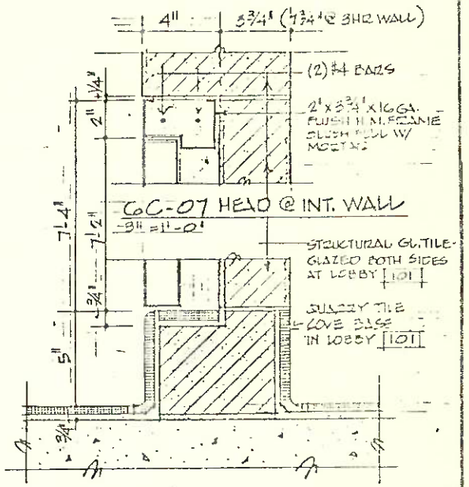
GC-11



GC-06 JAMB
3" = 1'-0"



GC-05 HEAD & SILL
ROLLING FIRE DOOR DETAILS AT ROOM 105
SCALE: 3" = 1'-0"

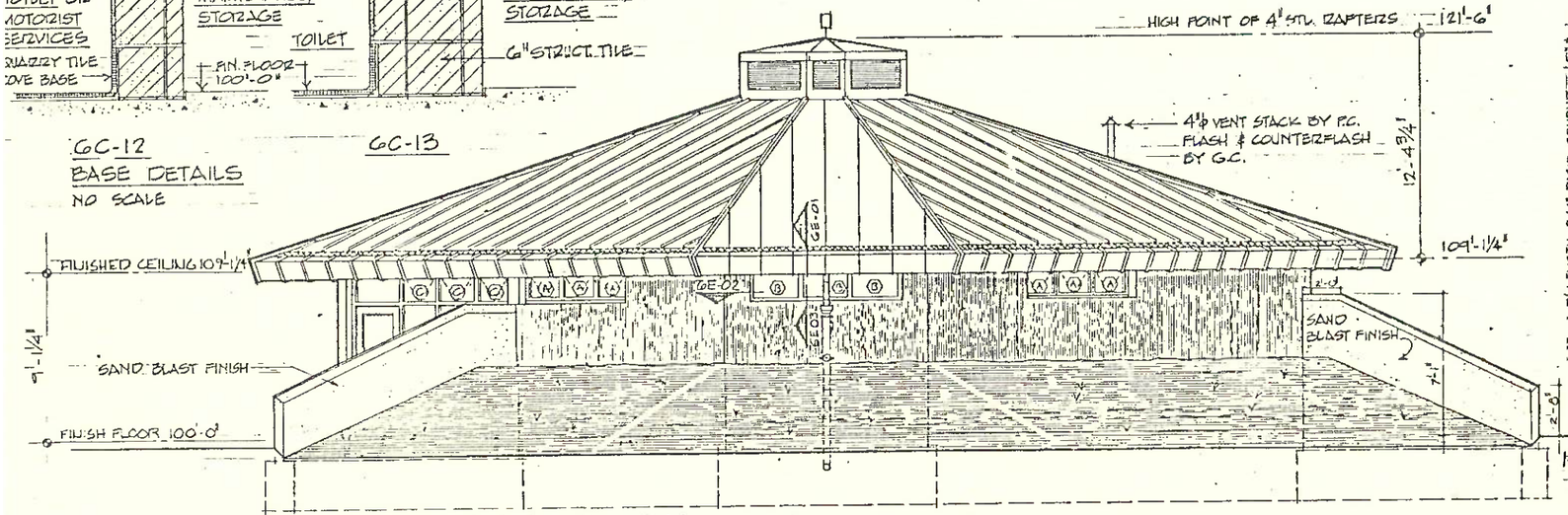


GC-07 HEAD @ INT. WALL
3" = 1'-0"

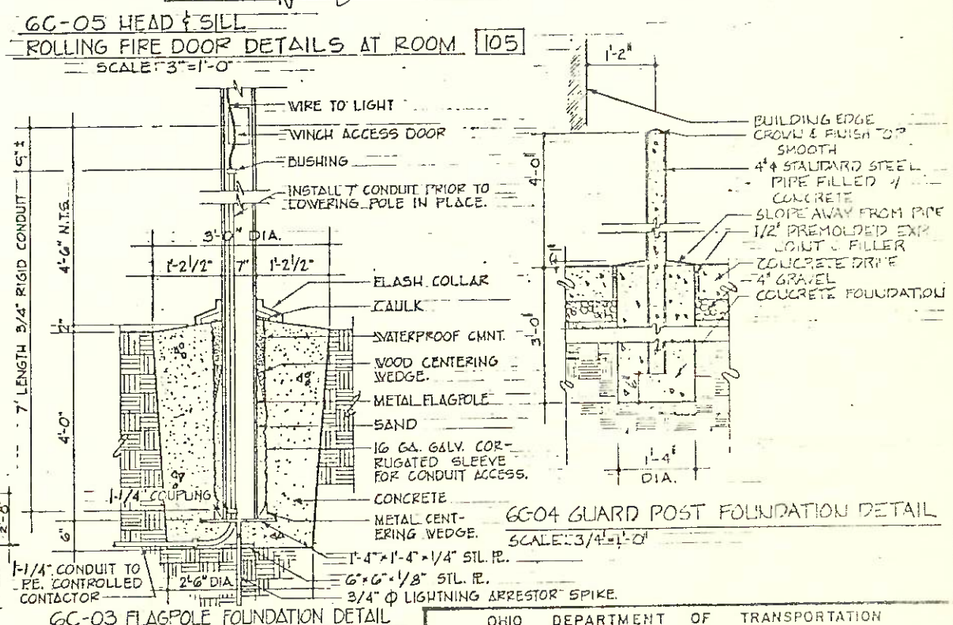
GC-08 SILL @ INT. WALL
DOOR № 09 FRAMING DETAILS
3" = 1'-0"
SEE DETAILS GD-11 THRU GD-13.

GC-12
BASE DETAILS
NO SCALE

GC-13



GC-02 RIGHT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

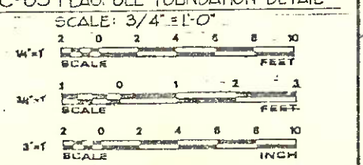


GC-03 FLAGPOLE FOUNDATION DETAIL
SCALE: 3/4" = 1'-0"

GC-04 GUARD POST FOUNDATION DETAIL
SCALE: 3/4" = 1'-0"

WINDOW SCHEDULE

WINDOW №	TYPE	HEIGHT	WIDTH	DETAILS	GLASS	REMARKS
(A)	OPERABLE SASH	1'-11¼"	SEE PLAN	GE-01, 2, 3	1" INSUL	BOTTOM-HINGED, PROJECTING W/ SOLAR SCREEN
(B)	FIXED SASH	1'-11¼"	DO	GE-01, 2, 3	DO	W/ SOLAR SCREEN
(C)	OPERABLE SASH	1'-9½"	DO	GC-05, 8	DO	BOTTOM-HINGED PROJECTING W/ SOLAR SCREEN



OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS
7-17-84

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO.
GC

ARCHITECTS • WRIGHT / KRITSCHGAU, ASSOCIATES, INC.
3600 TRABUE RD., COLUMBUS, OHIO
ENGINEERS • JOHN E. FOSTER & ASSOCIATES, COLUMBUS
GY TECHNOLOGIES • BATTELLE / COLUMBUS LABORA...

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10" X 10" OCCUPANCY PLAQUE — COLOR #1

BULLETIN BOARD, TYP. OF 2 — SEE GD-19 & GD-20

COLOR #2

CEILING COLOR

WOMEN — MEN — COLOR #1

PAINTED GRAPHICS ON FACE OF CONC. BEAM

DRINKING FOUNTAIN

TELEPHONE & ENCLOSURE BY PHONE CO.

16 GA. FLUSH H.M. 1 HR. "B" LABEL DOOR W/ 5" X 2'-9" WIRE GLASS VISION PANEL. DOOR (03) & (07)

GD-19

GD-20

OPP. HD.

PHONE FOR HANDICAPPED TO BE INSTALLED TO COMPLY WITH ANSI A117.1, SECTION 4.21.

SEE GB-07

SEE GB-03

SEE GB-08

TOP OF 8" RAFTERS @ L.P. EL. 121'-6"

TOP OF 4" RAFTERS @ L.P. EL. 120'-9"

TOP 10" RAFTERS @ L.P. EL. 117'-9"

TOP 10" RAFTERS @ L.P. EL. 110'-8¼"

TOP P.C. CONC. EL. 109'-9¼"

FIN. FL. EL. 100'-0"

TOP FTG. EL. 99'-4"

3'-0"

7'-0 ¾"

9'-9¼"

30" MIN.

107 — 108 — 106 — 101 — 102 — 104 — 103

GC-09

GD-14

GC-02

GC-05

05

3'-4" O/O

GD-15

6¼"

5/8" PLYWD.

2½"

OAK TRIM

#14 - 1½" VANDAL-PROOF RND. HD. WD. SCREW 12" O.C. T & B.

L 2½ x 3½ x ¼" LLV 5'-2½" LONG T & B

⅜" EXP. BOLTS 16" O.C. 4 EA. TOP & BOT.

SLIDING DOOR TRACK

¼" TEMP. GLASS

¾" PLYWD.

½" TACKBOARD

GD-16

3¾"

2¾"

CONT. 2 x 6

5'-4" O/O

⅜" PLYWD. PAINTED.

GD-17

GD-18

GD-19

GD-20

WALL ELEVATIONS

SCALE ¼" = 1'-0"

BULLETIN BOARD DETAILS

SCALE 3" = 1'-0"

GD-02 BUILDING SECTION

SCALE ¼" = 1'-0"

STANDING SEAM MTL. ROOF OVER BLDG. PAPER & 15# FELT ON 5/8" PLYWD. SHEATHING, CC-EXT-APA 42/20 FIRE TREATED USING NCX FIRE RETIRDENT W/ UNDERWRITERS' LABORATORY FRS FIRE HAZARD CLASSIFICATION.

SEE STRUCT. DRWG'S. FOR ROOF FRAMING.

SEE GB-03

TOP 10" RAFTER @ L.P. EL. 110'-8¼"

GB-08

TOP OF P.C. CONC. WALL

MID OF STL. RAFTER

MOUNTAIN AND FLOW

PRECAST CONC. CEILING PANELS. SEE STRUCT. DRWG'S.

2 LAYERS 6" ROLLED BATT INSUL.

.006 MIL VAPOR BARRIER

NOTE: INSULATION & VAPOR BARRIER SHALL COVER ALL DUCTS ON TOP OF PRECAST CONC. CEILING PANELS.

NOTE: SEE O.B.B.C. SECTION 315 FOR HANDICAP. LAV. & W.C. MOUNTING HEIGHTS & OTHER REQUIREMENTS.

6" PRECAST CONC. PANELS

2" RIDGID INSULATION

4" STRUCT. GLAZED TILE

4" CAST IRON ROOF LEADER DN. THRU ELBOW (TYP.) 4" CAST IRON CLEAN OUT CONNECTIONS TOP & BOTTOM

WATERPROOFING

6" DRAIN PIPE

4" ø PERFORATED DRAIN PIPE CONT. AROUND PERIMETER.

15 CRS. 4" STRUCTURAL GLAZE TILE

9'-1¼"

6'-0"

CAZZY RIBS MINIMUM 3' BELOW GRADE

RECESSED QUARRY TILE COVE. BASE

5/4 VERIFY W/ FLOOR USED

THIN-SET QUARRY TILE FIN. FLOOR.

4" CONC. SLAB W/ 6 x 6 - W1.4 x W1.4 WWF TYP. EXCEPT FOR RM. 105

2" SAND

VAPOR BARRIER

4" GRAVEL BASE

FIN. FLOOR EL. 100'-0"

½" PREMOLDED EXP. JT. FORMED WALL OR CONC. TRENCH FTG. SEE STRUCT. DRWG'S.

(2) #5 BAR - CONT.

USE SPREAD FOOTING EASTBOUND REST AREA

#5 @ 1'-3" c/c

ELEV. 91.5

ELEV. (929.0)

GD-01 TYPICAL WALL SECTION

SCALE 3/4" = 1'-0"

OVERHEAD BRACED 5/5 TOILET COMPARTMENTS

STACK BOND 16" x 8" GLAZED TILE

FLUOR. LIGHT FIXTURE

9'-1¼" CEIL. HGT.

DUPLEX RECEPTACLE

SAN-NAPKIN DISPOSAL

TOILET TISSUE DISPENSER

RECESSED WALL URN SCUP VALVE

6'-10"

7'-4"

8'-1"

5'-2"

2'-7"

3'-9"

5'-0"

12'-7"

6" x 5" QUARRY TILE COVE BASE

GD-03 ELEVATION WOMEN'S TOILET RM. 102

SCALE ¼" = 1'-0"

10" X 6" EXHAUST GRILLE - B'-9" A.F.F. TO ¢ OF GRILLE

GD-13

6" x 42" ⅝ URINAL SCREEN W/ FLUSH POST

DUPLEX RECEPTACLE

6'-10"

7'-9"

URINAL

GD-04 ELEV. MEN'S TOILET RM. 106

SCALE ¼" = 1'-0"

SEE GA-03 & GA-08

JOB LOCATE

4'-0¼" M.O.

1'-4"

2'-8"

2'-8"

GD-11

GC-07

GD-10 SIMILAR

GD-12

GC-08

RECESSED ELECT. WARM AIR HAND DRYER

18" x 30" ⅝ FRAMED MIRROR

GD-09 SIMILAR

RECESSED ⅝ VANITY RECEPT.

OPP. HD.

RECESSED ⅝ SHELF

GD-05 ELEV. TOILET RM. 102 & 106

SCALE ¼" = 1'-0"

GD-06 ELEV. T. RM. 102 & 106

SCALE ¼" = 1'-0"

STACK BOND 16" x 8" GLAZED TILE

FLUOR. LIGHT FIXTURE

RECESSED ELECTRIC WARM AIR HAND DRYER SEE WINTER SCHEDULE

16" x 30" ⅝ FRAMED TILT MIRROR

½" DIA. SS RAILS

⅝ SAN. NAPKIN DISPOSAL W/ TOILET 103 ONLY

9'-1¼" CEIL. HGT.

7'-1"

4'-0"

2'-0"

LAV.

2'-8" MAX.

2'-4"

3'-1"

6" x 5" QUARRY TILE COVE BASE

GD-07

SOAP VALVE

GD-08

WALL MTD. 8" ø TOILET TISSUE DISPENSER

ELEVATION WOMEN'S HANDICAPPED TOILET ROOM 103

SCALE ¼" = 1'-0"

MEN'S HANDICAPPED TOILET ROOM 107 SIMILAR / OPPOSITE HAND

FIN. ELEL. 100'-0"

2 LAYERS 6" ROLLED BATT INSUL OVER .006 MIL VAPOR BARRIER

16 GA. GALV. MTL. ON 5/8" PLYWD.

2'-0" SQ. OPNG.

16 GA. GALV. MTL.

CONT. L 1½ x 2½ x 3/16" LLV RAMSET TO PRECAST CONC.

GD-21

SCALE 3/4" = 1'-0"

GD-22

SCALE 3" = 1'-0"

CEILING ACCESS PANEL SECTION & DETAIL

MECHANICAL ROOM 108

GD-09 HEAD @ EXT. WALL

4" 2" 6"

ZEE FURR. CONT. AROUND PERIMETER 2'-0" O.C.

2" RIGID INSUL.

2" x 3¾" x 16 GA. FLUSH H.M. FRAME, SLUSH FULL W/ MORTAR

2 #4 BARS

7'-2" FIN. OPNG.

¼"

¾"

5'-5"

16 GA. GALV. MTL. COVER FOR INSUL. TO BE PAINTED.

½" QUARRY TILE SLUSH FULL W/ MORTAR

STRUCTURAL GLAZED TILE

(U) #5 BAR (CONT.)

6"

4"

8"

9"

9"

GD-10 SILL @ EXTERIOR WALL

DOOR Nº (09) FRAMING DETAILS (GD-09 THRU GD-13)

SCALE 3" = 1'-0"

SOAPS @ 3 HR. WALL

7¾" @ 3 HR. WALL

11¾" @ 3 HR. WALL

4'-0¼" M.O.

CAULK ALL AROUND 3'-7¾" FIN. OPNG.

¼"

2"

2"

¼"

GD-11 JAMB @ INT. WALL

GD-12 JAMB @ INT. WALL

3¾"

¾" ± JOB LOCATE

3'-8½" ± JOB LOCATE

2" x 3¾" x 7'-9" x 16 GA. FRAME

GD-13 JAMB @ WING WALL

¼"=1' SCALE 2 0 2 4 6 8 10 FEET

¾"=1' SCALE 1 0 1 2 3 FEET

3"=1' SCALE 2 0 2 4 6 8 10 INCH

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS
9-26-84

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO.

ARCHITECTS • WRIGHT / KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO

ENGINEERS • JOHN E. FUSTER & ASSOCIATES, COLUMBUS, OHIO

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NOTE: PROVIDE WOOD BLOCKING @ 'B' WINDOWS

ANODIZED ALUM. CLOSURE STRIP

NOTE: REFER TO DRAWING G1 FOR STEEL LINTEL SIZES

GE-01 HEAD - WINDOW 'A' OPERABLE SASH
WINDOW 'B' FIXED SASH SIMILAR
SCALE 3"=1'-0"

WOOD BLOCKING
STRUCTURAL GLAZE TILE BULLNOSE RETURN
CAULK
2¼" BOTTOM HINGED PROJECTED THERMAL BREAK ALUM. WINDOW
CAULK

GE-02 JAMB - WINDOW 'A' OPERABLE SASH
WINDOW 'B' FIXED SASH SIMILAR
SCALE 3"=1'-0"

CAULK
CAULK
SOLAR SCREEN WITH SLIDING HORIZONTAL TRACK. REMOVE MINIMUM 3/8" OF LOWER TRACK DURING MANUFACTURING TO ALLOW SCREEN REPLACEMENT AFTER UNIT IS INSTALLED

GE-03 SILL - WINDOW 'A' OPERABLE SASH
WINDOW 'B' FIXED SASH SIMILAR
SCALE: 3"=1'-0"

2¼" BOTTOM HINGED PROJECTED THERMAL BREAK ALUM. WINDOWS
SOLAR SCREEN HINGED @ TOP
1"x1¾" ALUMINUM (1/8" WALL THICKNESS) SCREEN STOP
1/2"x 1/2" ALUMINUM (3/32" WALL THICKNESS) SCREEN STOP

EQUAL SHIM E.S.
¼" TEMPERED GLASS

SHIM R
CAULK - TYPICAL
2"x4" STEEL COLUMN
.062 ALUM. BREAK-METAL

.062 ALUMINUM BREAKMETAL

GE-05 JAMB DETAILS
SCALE 3"=1'-0"

RETAINING WALL ON BREAK METAL

CAULKING
SHIM R
1/2"x1/2" ALUMINUM DOOR STOP W/ WEATHER SEAL

EQUAL SHIM E.S.

4½"x1¾" ALUM. THERMAL WINDOW FRAMING

CAULKING
SHIM R
.062 ALUM. BREAKMETAL
2"x4" STEEL COLUMN (INSULATE)

4½"x1¾" VERT. ALUM MULLION INSULATE

1¾" ALUMINUM WIDE STILE DOOR W/ ¼" LAMINATED SAFETY GLASS

GE-06 JAMB DETAILS & COLUMN DETAIL
SCALE 3"=1'-0"

NOTE: ALL ALUMINUM TO BE DARK BRONZE ANODIZED FINISH - SEE SPECS.

GE-12 WINDOW SCREEN ELEVATION
SCALE: 3/4"=1'-0"

BULLNOSE STRUCTURAL GLAZE TILE
CONTINUOUS ¼" CAULKING
SCREEN
TRACK

2x CUT TO SIZE - CONT.

.040" ALUM BREAK METAL

2x CUT TO SIZE - CONT.

12¼"x6" PRECAST LINTEL TO MATCH EXTERIOR PANELS
2" RIGID INSULATION
CAULK
(2) #5 BARS - CONT.
HEAD SEAL BY MFG.

4½"x1¾" ANODIZED ALUM. THERMAL WINDOW FRAMING W/1" INSULATED TEMP. GLASS

4"ϕ STD. STL. PIPE 4' ABOVE GRADE ONE @ EA. JAMB. PLACE IN 16"ϕ CONC. FTG. 36" DEEP. FILL W/CONC.

SHIM & CAULK

GE-09 HEAD-OVERHEAD DOOR
SCALE 3"=1'-0"

3 OZ CU. FLASHING

L7x4x3/8 L.L.H.

2" INSULATED OH. DR.

PRECAST CONCRETE
2" RIGID INSULATION

CAULK

1'-2" (NTS)

L7x4x3/8 W/1½" ϕ BENT STL ANCHORS @ 2'-0" o.c.

GE-10 JAMB - OVERHEAD DOOR
SCALE: 3"=1'-0"

CONTINUOUS WEATHER STRIP BY OH DOOR MFG.

℄ OF PRECAST PANEL

2" INSUL. O.H. DOOR

6" CONC. SLAB W/ 6x6-W2.9 x W2.9 WWF

STEEL L BEYOND

INSIDE FACE OF WALL
OUTSIDE FACE OF WALL

4"x4"x¼" L @ 2'-0" o.c.

BASE WEATHERSTRIP

SLOPE ¼"/FT MIN.

7" PLAIN PORTLAND CEM. CONC. ON PREPARED SUBGRADE. O.D.O.T. C & M SPEC. ITEM 452

½" PREMOLDED EXP. JOINT & FILLER

VAPOR BARRIER
GRAVEL
22" TRENCH FTG.

2" RIGID INSULATION RUN 2' EACH WAY

GE-11 SILL-OVERHEAD DOOR
SCALE 3"=1'-0"

ANODIZED ALUM. CLOSURE STRIP

PRECAST CONC CEILING PANEL

VINYL ISOLATION @ DISSIMILAR METALS

COPPER RETURN

CAULK

½" ANODIZED ALUM. THERMAL WINDOW FRAMING W/(¼-½"-¼) TEMPERED GLASS. (TYP.)

3¾" x 6" PRECAST CONC SILL

QUARRY TILE BULLNOSE RET.

QUARRY TILE COVE BASE

STRUCT. UNGLAZED TILE CUT AS REQ'D

½" PREMLD. EXP. JOINT & FILLER

CARRY VAPOR BARRIER THRU SLAB PERIMETER

2" RIGID INSULATION

2' RIGID INSULATION RUN 2' EACH WAY

18" TRENCH FTG.

GE-04 HEAD, MULL. & SILL
SCALE: 3"=1'-0"

4½"x1¾" ALUM RAIL INSULATE

½" x ½" ALUMINUM DOOR STOP W/ THERMAL SEAL

1¾" ALUMINUM WIDE STILE DOOR W/ ¼" LAMINATED SAFETY GLASS

5"x½" ALUM. THRESHOLD

CONC SILL BEYOND

ADJUSTABLE WEATHER-STRIP BY DOOR MFG.

MASONRY WINDOW SILL BEYOND

½" QUARRY TILE

THRESHOLD - FLUSH W/ QUARRY TILE

2"x2" BLKG. UNDER THRSHLD

(1) #5 BAR (CONTINUOUS) (TYPICAL AT BLDG. PERIMETER)

18" TRENCH FTG.

2' RIGID INSULATION RUN 2' EACH WAY

GE-07 HEAD & SILL THRU ENTRANCE DOOR SCALE: 3"=1'-0"

STEEL LINTEL
ANODIZED ALUM CLOSURE STRIP
PRECAST CONC CEILING PANEL
1" RIGID INSULATION
2x BLOCKING

VINYL ISOLATION @ DISSIMILAR METALS
COPPER RETURN
CAULK

BOTTOM HINGED PROJECTED THERMAL BREAK ALUMINUM WINDOWS. W/1" INSUL. TEMPERED GLASS

SOLAR SCREEN HINGED @ TOP
1/2"x1/2" ALUMINUM (3/32" WALL THICKNESS) SCREEN STOP

ALUM. FIXED GLASS W/ GLASS OF OPERABLE SASH

4½"x1¾" ALUM THERMAL WINDOW FRAMING

GE-08 HEAD & HORIZ. MULLION @ WINDOW 'C'
SCALE: 3"=1'-0"

W"=1' SCALE 2 0 2 4 6 8 10 FEET
¾"=1' SCALE 1 0 1 2 3 FEET
3"=1' SCALE 2 0 2 4 6 8 10 INCH

OHIO DEPARTMENT OF TRANSPORTATION
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REVISIONS

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO. GE

ARCHITECTS • WRIGHT / KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO
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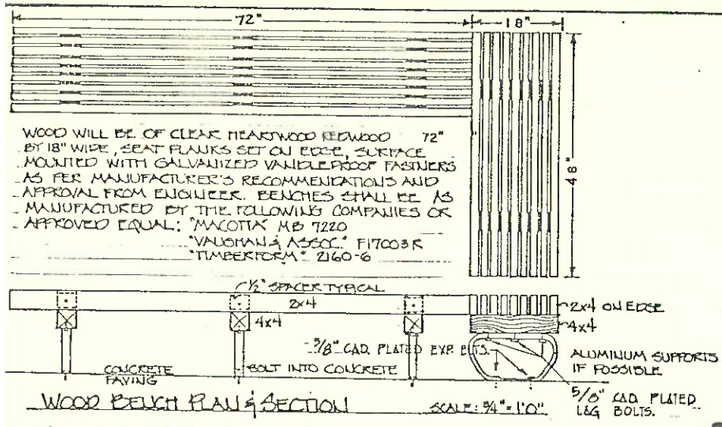
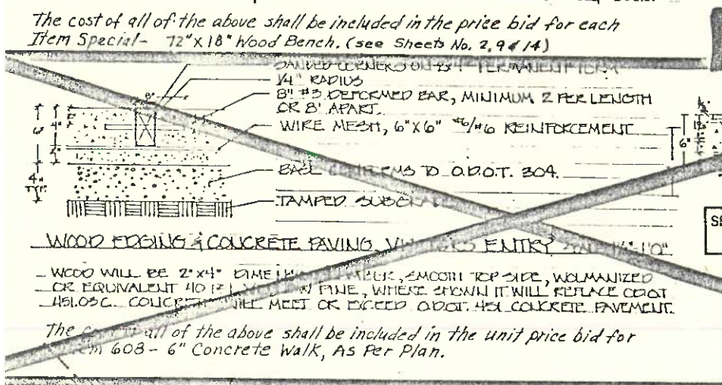
ENERGY TECHNOLOGIES • BATTELLE / COLUMBUS LABORATORIES

DATE



WOOD BENCH PLAN & SECTION SCALE: 3/4"=1'0"

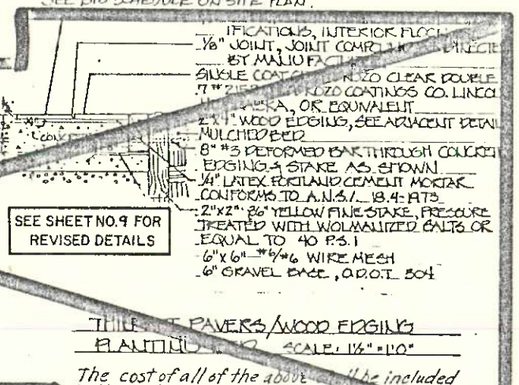
The cost of all of the above shall be included in the price bid for each Item Special- 72"x18" Wood Bench. (see Sheets No. 2, 9 & 14)



WOOD EDGING & CONCRETE PAVING AT VISITOR ENTRY SCALE: 1/4"=1'0"

WOOD WILL BE 2"x4" DIMENSION LUMBER, SMOOTH TOP SIDE, WOLMANIZED OR EQUIVALENT #10 (2) GRADE OR BETTER PINE, WHERE SHOWN IT WILL REPLACE CB OR #6 SLOS.C. CONCRETE CURB. MEET OR EXCEED O.D.O.T. #451 CONCRETE PAVEMENT.

The cost of all of the above shall be included in the unit price bid for Item 608 - 6" Concrete Walk, As Per Plan.

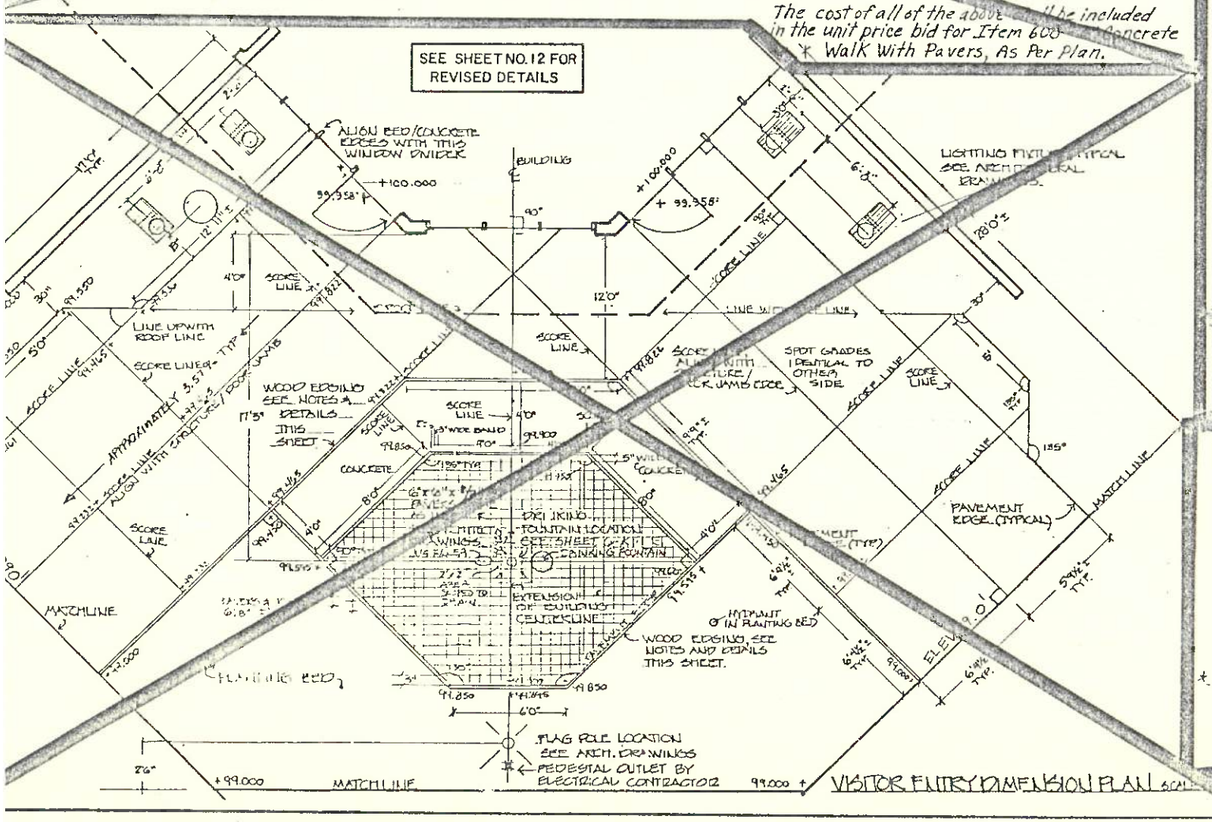


SEE SHEET NO.9 FOR REVISED DETAILS

THICK PAVERS/WOOD EDGING PLANTING SCALE: 1/4"=1'0"

The cost of all of the above shall be included in the unit price bid for Item 608 Concrete Walk With Pavers, As Per Plan.

SEE SHEET NO.12 FOR REVISED DETAILS



VISITOR ENTRY DIMENSION PLAN SCALE: 1/16"=1'0"

GENERAL NOTES:

1. FOR GENERAL NOTES ON PLANTING, REFER TO STATE OF OHIO, DEPT. OF TRANSPORTATION GENERAL NOTES.
2. FOR PLANTING DETAILS SEE BUREAU OF DESIGN SERV. STANDARD CONSTRUCTION DRAWING LA-2. RECOMMEND GUYING WIRE ON ALL TREES UNDER 3" CALIPER TO BE NO. 14 WIRE.
3. THIS PLANT LIST WAS SELECTED TO PERFORM WELL IN ALL REGIONS OF THE STATE. SUBSTITUTIONS SHOULD BE ALLOWED ONLY IF EVIDENCE IS GIVEN TO SHOW THAT RECOMMENDED PLANTS WILL NOT PERFORM ON A PARTICULAR SITE.
4. SOD WITHIN BUILDING CONSTRUCTION LIMITS WILL BE COMPOSED OF AN APPROVED MIXTURE OF DISEASE RESISTANT AND DROUGHT TOLERANT GRASSES: IMPROVED KENTUCKY BLUE GRASSES, FINE PERENNIAL RYES, & IMPROVED CREEPING RED FESCUES.

GRASSES NO TALLER THAN 2" WHEN INSTALLED. INSTALLATION WILL BE AS SPECIFIED IN O.D.O.T. CONSTRUCTION AND MATERIAL SPECIFICATIONS 660.04 TO 660.08.

5. NOTES ON PLANTING PLAN ONLY WHEN BLDG. FRONT FACES ARE INDICATES CARDINAL ORIENTATIONS FOR INCLUSION OF EACH TREE. WHEN BUDGET CONSTRAINTS REQUIRE DELETIONS, SEE BID SCHEDULE ON SITE PLAN.

PLANT LIST

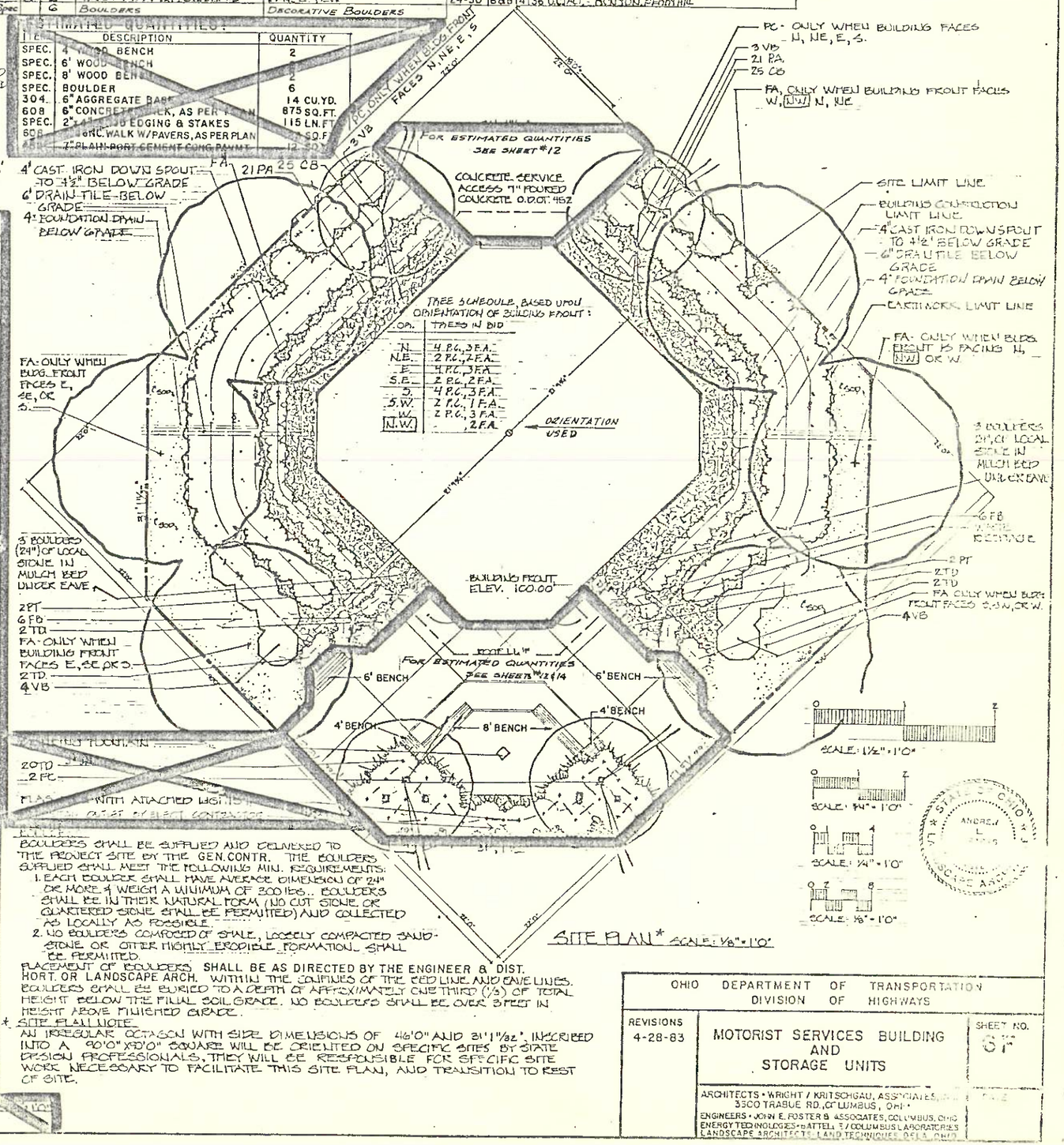
ITEM	KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACE	REMARKS/ALTERN.
663	FA	2	~~FRAXINUS AMER. 'AUTUMN P.'~~	AUTUMN PURPLE ASH	2"-2½"	B&B 28'	A.S.	GLEDITSIA TRI. SKYLINE
			~~PYRUS CALLERYANA 'AURORA'~~	~~AURORA CALLERY PEAR~~	2"-2½"	B&B 28'	A.S.	CERCIDIPHYLLUM JAPONICUM
662	CB	50	COTONEASTER DAMMERI 'C.D.'	CORAL BEAUTY COTONEASTER	15"-18"	2 CONT.	4'0.C.	= FULL 2 YR. PLANTS
661	PT	4	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY	2 YR.	2 CONT.	A.S.	—
662	PA	42	PYRACANTHA ANG. 'GNOME'	GNOME FIRETHORN	24"-30"	3 CONT.	3'0.C.	ALT. JUNIPERUS C. PFITZERIANA, COMPACT VAR.
662	VB	14	VIBURNUM BURKWOODI	BURKWOOD VIBURNUM	30"-36"	B&B 12'	5'0.C.	ALT. CHEHALIS, PYRAMIDALE
662	FS	12	FORSYTHIA VIR. BRONXENSIS	BRONX FORSYTHIA	15"-18"	3 CONT.	42"O.C.	ALT. COTON. HORIZONTALIS
662	TD	8	TAXUS MEDIA 'RUNDIFORMIS'	DENSE YEW	24"-30"	B&B	36"O.C.	ALT. - BONYON, BERRYHILL
Spec		6	BOULDERS	DECORATIVE BOULDERS				

GUERNSEY COUNTY OHIO
GUE - 70 - 19.37
FHWA REGION 5
90 GG

CALC BY _____ DATE _____
CHKD BY HWD DATE 7-1-84

ESTIMATED QUANTITIES:

ITEM	DESCRIPTION	QUANTITY
SPEC.	4' WOOD BENCH	2
SPEC.	6' WOOD BENCH	2
SPEC.	8' WOOD BENCH	2
SPEC.	BOULDER	6
304.	6" AGGREGATE BASE	14 CU.YD.
608	6" CONCRETE WALK, AS PER PLAN	875 SQ.FT.
SPEC.	2"x4" WOOD EDGING & STAKES	115 LN.FT.
608	CONC. WALK W/PAVERS, AS PER PLAN	SQ.F
451	7" PLAIN-BOAT CEMENT CONC. PAVMNT.	12 SQ.Y



BOULDERS SHALL BE SUPPLIED AND DELIVERED TO THE PROJECT SITE BY THE GEN. CONTR. THE BOULDERS SUPPLIED SHALL MEET THE FOLLOWING MIN. REQUIREMENTS:

1. EACH BOULDER SHALL HAVE AVERAGE DIMENSION OF 24" OR MORE & WEIGH A MINIMUM OF 300 LBS.. BOULDERS SHALL BE IN THEIR NATURAL FORM (NO CUT STONE OR QUARTERED STONE SHALL BE PERMITTED) AND COLLECTED AS LOCALLY AS POSSIBLE.
2. NO BOULDERS COMPOSED OF SHALE, LOOSELY COMPACTED SANDSTONE OR OTHER HIGHLY ERODIBLE FORMATION SHALL BE PERMITTED.

PLACEMENT OF BOULDERS SHALL BE AS DIRECTED BY THE ENGINEER & DIST. HORT. OR LANDSCAPE ARCH. WITHIN THE CONFINES OF THE SEED LINE AND EAVE LINES. BOULDERS SHALL BE BURIED TO A DEPTH OF APPROXIMATELY ONE THIRD (⅓) OF TOTAL HEIGHT BELOW THE FINAL SOIL GRADE. NO BOULDERS SHALL BE OVER 3 FEET IN HEIGHT ABOVE FINISHED GRADE.

SITE PLAN* SCALE: 1/16"=1'0"

* SITE PLAN NOTE
AN IRREGULAR OCTAGON WITH SIDE DIMENSIONS OF 46'0" AND 31'1⅞2", INSCRIBED INTO A 90'0"X90'0" SQUARE WILL BE ORIENTED ON SPECIFIC SITES BY STATE DESIGN PROFESSIONALS, THEY WILL BE RESPONSIBLE FOR SPECIFIC SITE WORK NECESSARY TO FACILITATE THIS SITE PLAN, AND TRANSITION TO REST OF SITE.

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS 4-28-83

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO. 6F

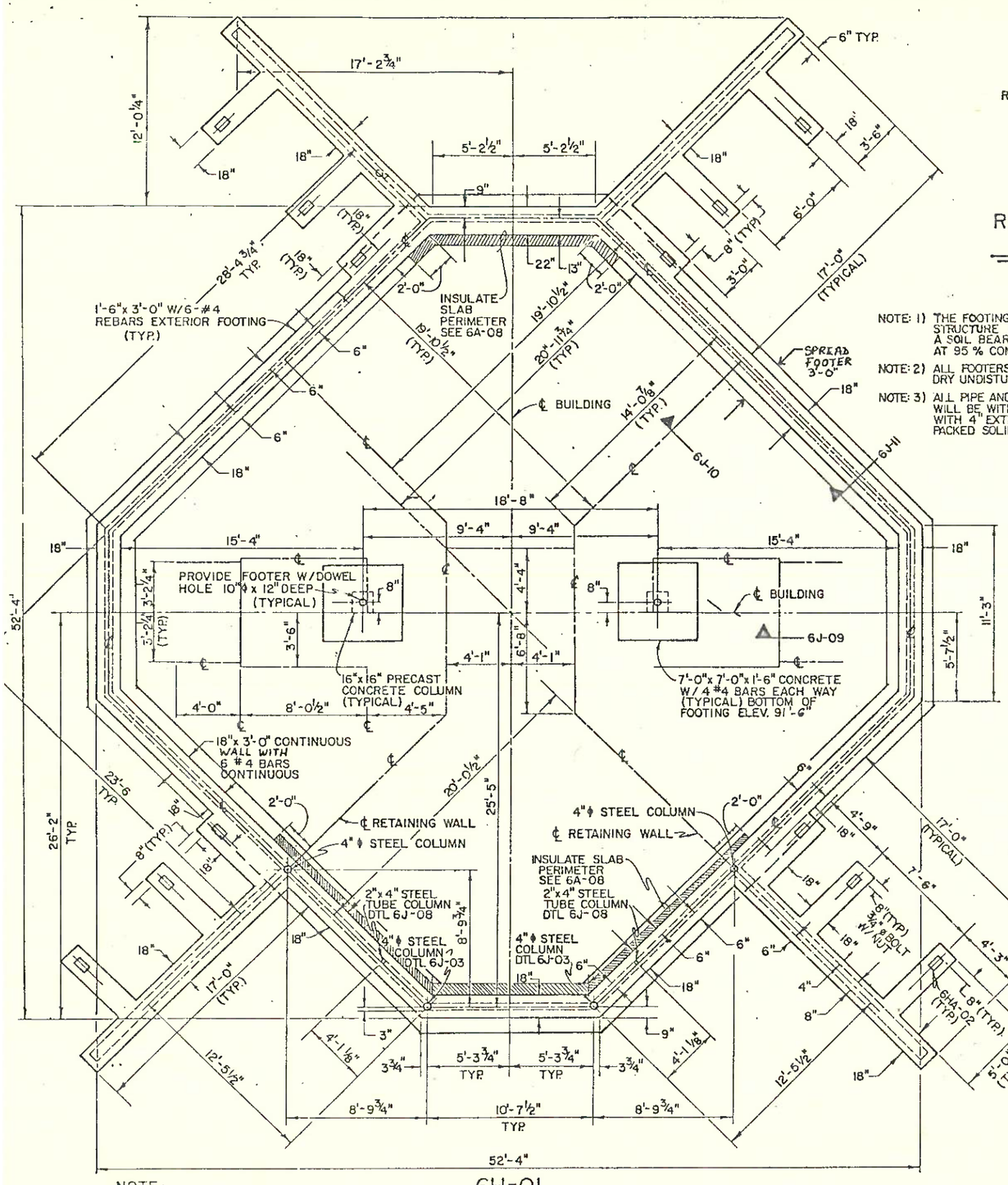
ARCHITECTS • WRIGHT / KRITSCHGAU, ASSOCIATES, 3500 TRABUE RD., COLUMBUS, OHIO
ENGINEERS • JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TECHNOLOGIES • BATTELLE / COLUMBUS LABORATORIES
LANDSCAPE ARCHITECTS: LAND TECHNIQUES, DELAWARE, OHIO

STATE OF OHIO ANDREW L. STOLTZ REGISTERED LANDSCAPE ARCHITECT

GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

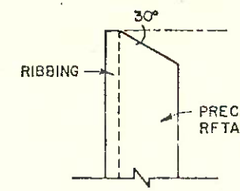
52
66



NOTE:
PROVIDE 4-¾ ANCHOR BOLTS 8"LONG W/3" BEND 6"O.C. FOR EACH OF THE 4" ϕ STEEL COLUMNS.

6H-01
FOUNDATION PLAN

0 1 2 4 6 8
SCALE IN FEET



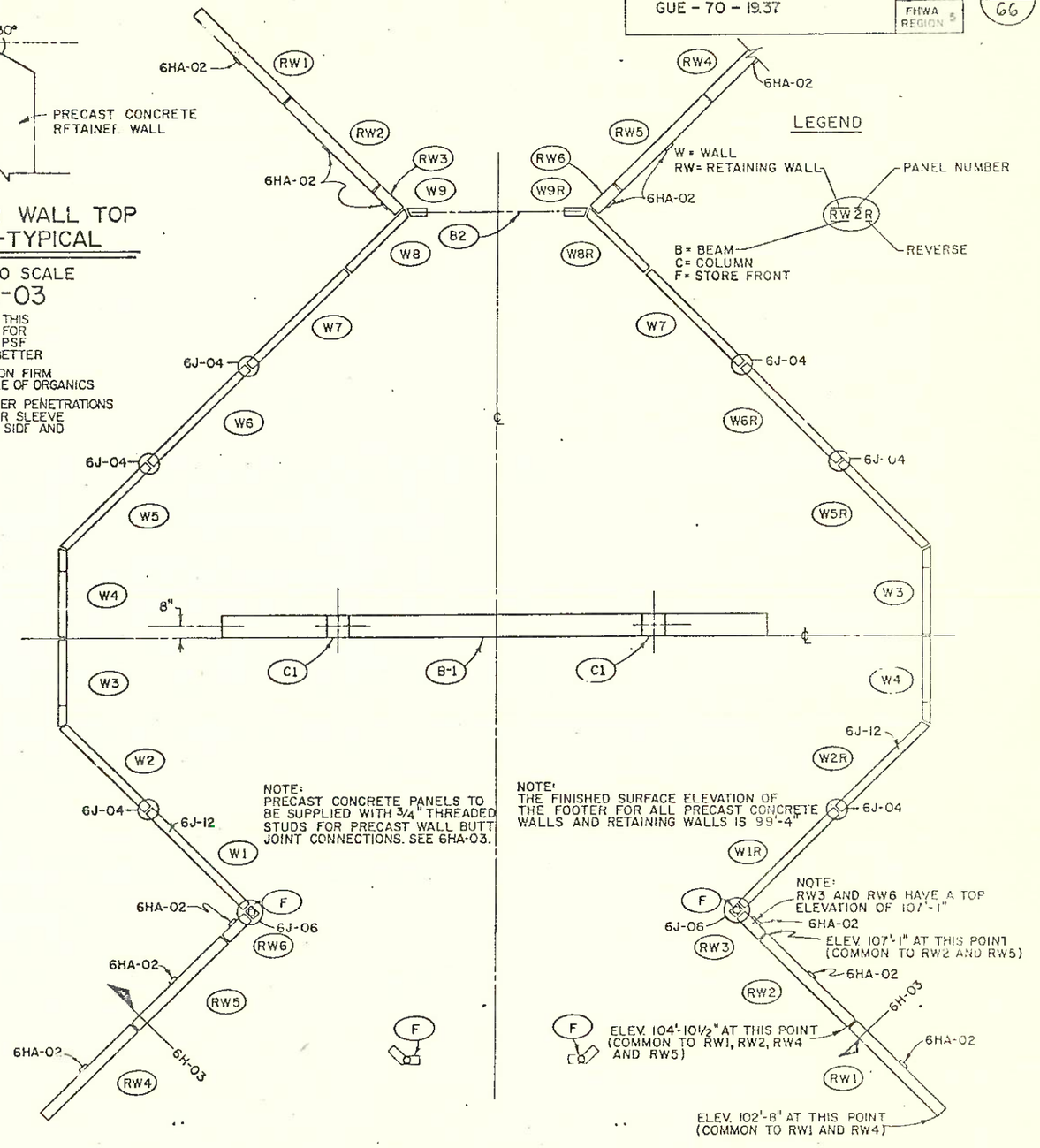
RETAINER WALL TOP DETAIL-TYPICAL

NOT TO SCALE
6H-03

NOTE: 1) THE FOOTINGS SUPPORTING THIS STRUCTURE ARE DESIGNED FOR A SOIL BEARING OF 3000 PSF AT 95 % COMPACTION OR BETTER

NOTE: 2) ALL FOOTERS ARE TO BEAR ON FIRM DRY UNDISTURBED SOIL FREE OF ORGANICS

NOTE: 3) ALL PIPE AND CONDUIT FOOTER PENETRATIONS WILL BE WITH A 1"ø GREATER SLEEVE WITH 4" EXTENDED EITHER SIDE AND PACKED SOLID



6H-02
PRECAST CONCRETE ERECTION PLAN

0 1 2 4 6 8
SCALE IN FEET

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS
9-26-84

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO
6H

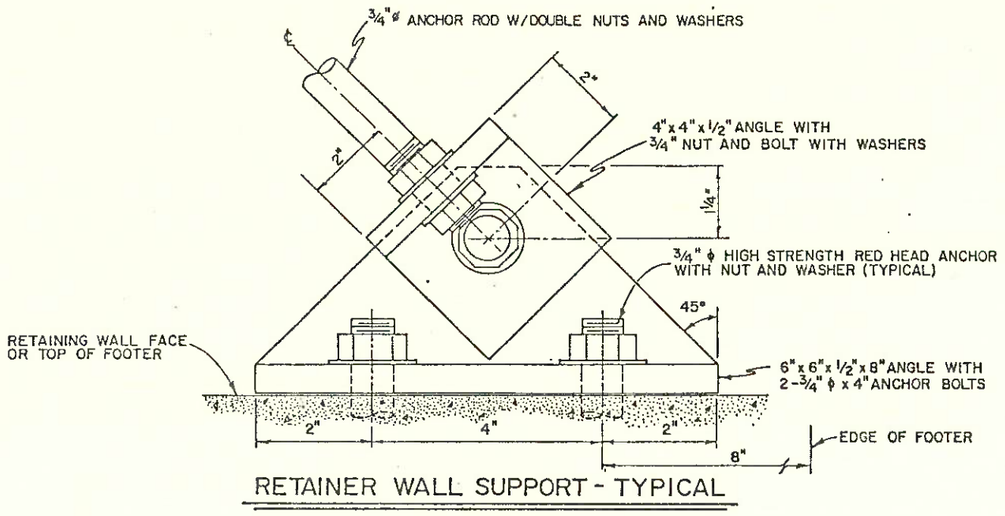
ARCHITECTS-WRIGHT / KRITSCHGAU, ASSOCIATES, INC.
3600 TRABUE ROAD, COLUMBUS, OHIO

ENGINEERS JOHN E. FOSTER & ASSOCIATES, COLUMBUS

ENERGY TECHNOLOGIES BATTELLE / COLUMBUS

GUERNSEY COUNTY GUE - 70 - 19.37	OHIO FHWA REGION 5	53 66

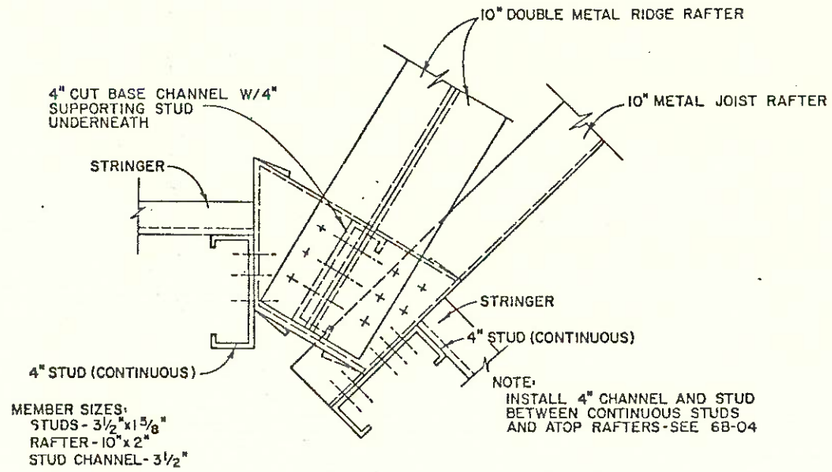
NOTE: THE COMPLETED ASSEMBLY WILL RECEIVE A 1/4" COAT OF ROOFING TAR OVER ENTIRE ASSEMBLY AND BEARING



RETAINER WALL SUPPORT - TYPICAL

NOT TO SCALE

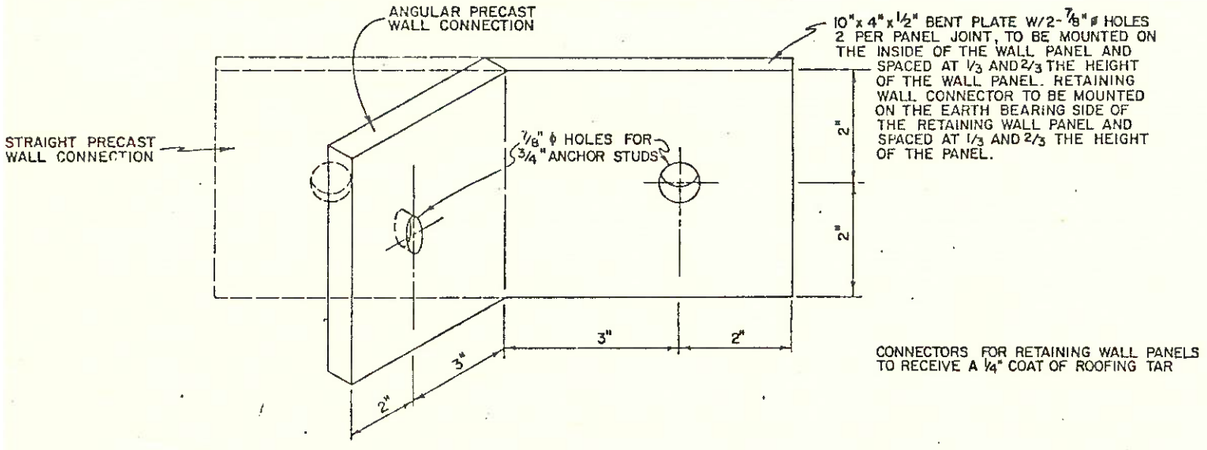
6HA-02



ROOF RAFTER FRAMING PLAN DETAIL - TYPICAL

NOT TO SCALE

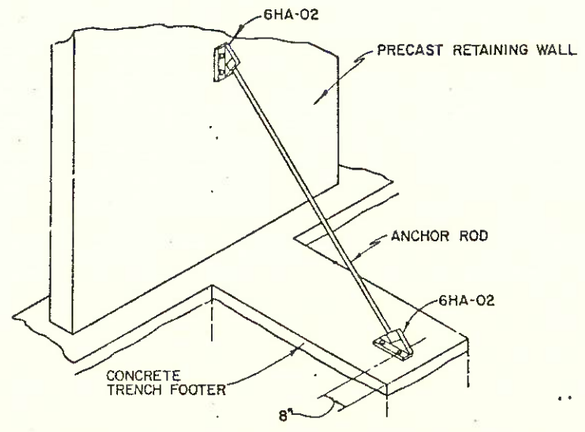
6HA-01



PRECAST WALL BUTT JOINT CONNECTOR - TYPICAL

NOT TO SCALE

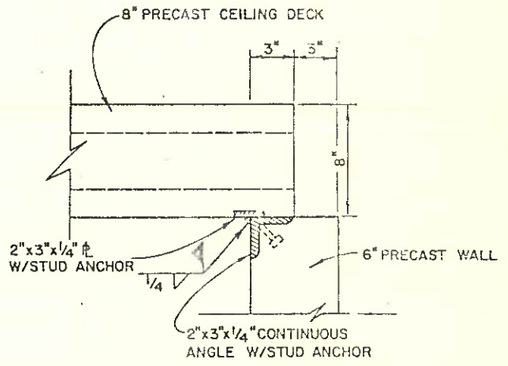
6HA-03



RETAINER WALL SUPPORT ASSEMBLY - TYPICAL

NOT TO SCALE

6HA-04



BEARING WALL / PRECAST DECK JOINT CONNECTION

NOT TO SCALE

6HA-05

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS	MOTORIST SERVICES BUILDING AND STORAGE UNITS	SHEET NO. 6HA
	ARCHITECTS: WRIGHT / KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES BATTELLE / COLUMBUS LABORATORIES	DATE

GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

54
66

NOTE 1 STEEL LINTELS AT PRECAST CONC. OPENINGS WILL BE PROVIDED BY PRECAST FABRICATOR.

NOTE 2 ALL OPENINGS AROUND CEILING PENETRATIONS SHALL BE FORMED AND POURED WITH CONCRETE.

NOTE 3 ALL WALL OPENINGS WILL HAVE LINTELS OF 2-#4 BARS EXTENDING 8" BEYOND THE FRAME EACH SIDE.

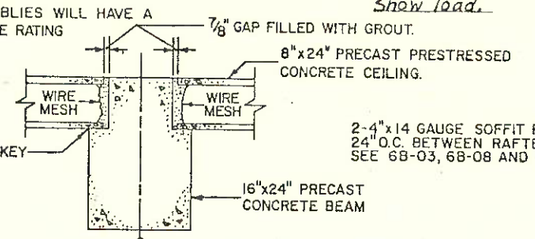
NOTE 4 ALL PRECAST STRUCTURES WILL BE ASSEMBLED AS PER MANUFACTURERS INSTRUCTIONS.

NOTE 5 ALL PRECAST CONCRETE CEILING DECK OPENINGS WILL BE BY FABRICATOR

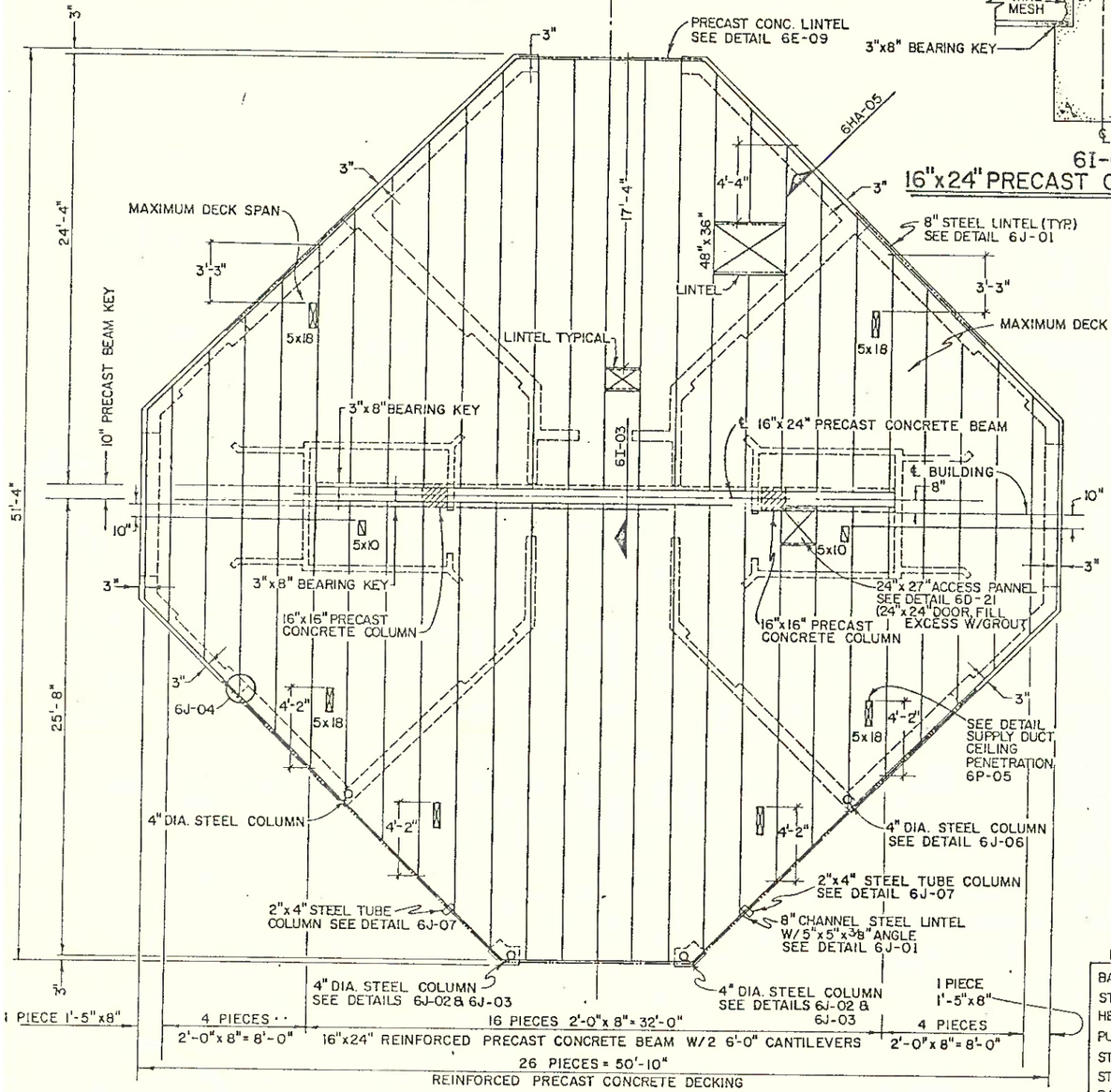
NOTE 6 PRECAST CONCRETE DECK WILL BE DESIGNED TO SUPPORT A LIVE LOAD OF 52 PSF AT MAXIMUM SPAN

NOTE 7 ALL PRECAST ASSEMBLIES WILL HAVE A MINIMUM 2-HOUR FIRE RATING

Note 8 - The building as designed by the Architect and Engineer was designed to handle a 25 pound-force per square foot (PSF) snow load.

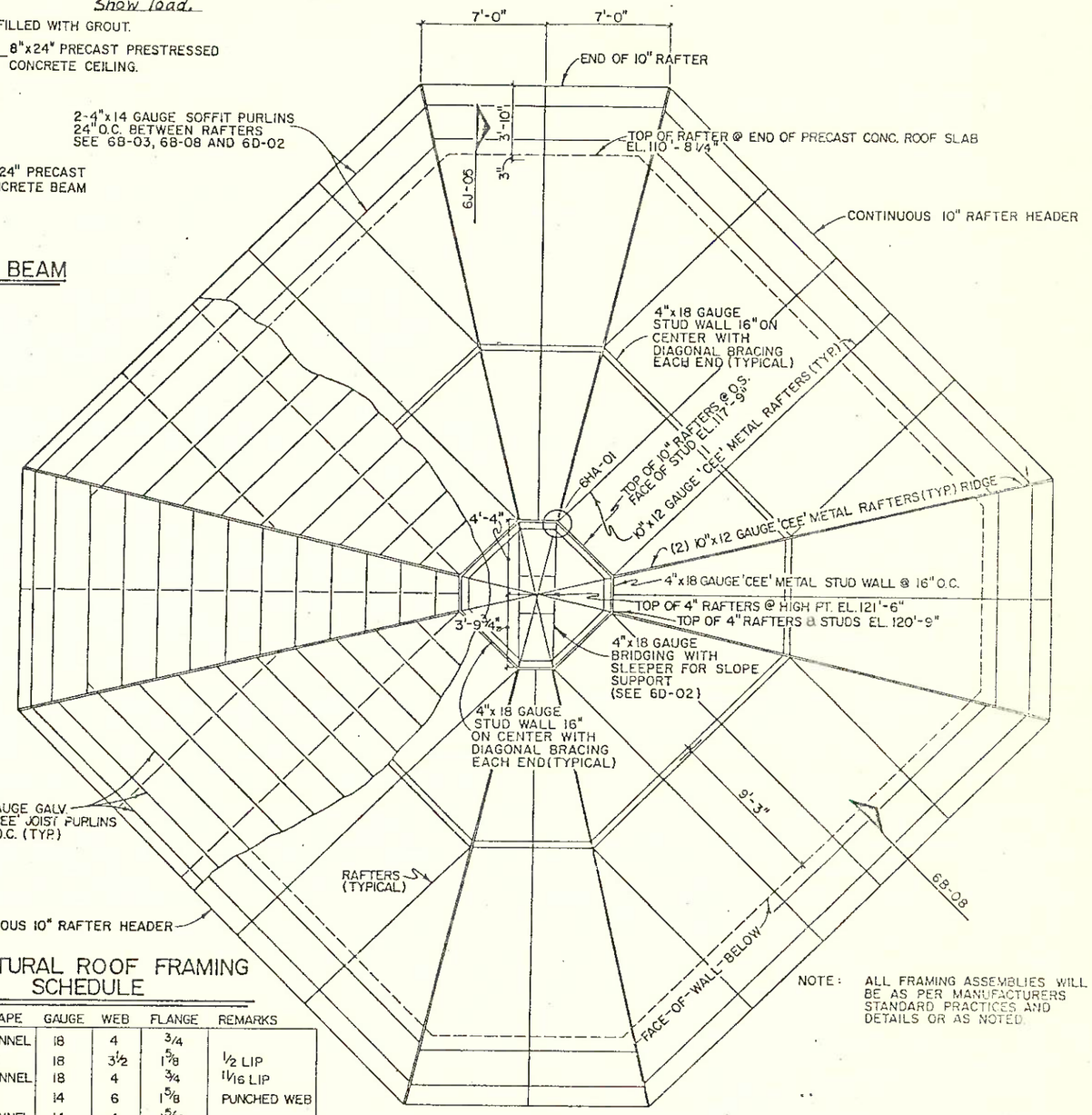


6I-03
16"x24" PRECAST CONCRETE BEAM



6I-01
CEILING DECK PLAN

0 1 2 4 6 8
SCALE IN FEET



NOTE: ALL FRAMING ASSEMBLIES WILL BE AS PER MANUFACTURERS STANDARD PRACTICES AND DETAILS OR AS NOTED.

STRUCTURAL ROOF FRAMING SCHEDULE

MEMBER	SHAPE	GAUGE	WEB	FLANGE	REMARKS
BASE RUNNER	CHANNEL	18	4	3/4	
STUD	CEE	18	3 1/2	1 5/8	1/2 LIP
HEADER	CHANNEL	18	4	3/4	11/16 LIP
PURLIN	CEE	14	6	1 5/8	PUNCHED WEB
STRINGER	CHANNEL	14	4	1 5/16	
STRINGER	CHANNEL	14	10	1 5/16	
RAFTER	CEE	12	10	2	11/16 LIP
RAFTER	CEE	14	4	1 5/8	PUNCHED WEB
X-BRACING		18			STRIPS

NOTE: ALL METAL FRAMING JOINTS WILL HAVE A MINIMUM OF TWO FASTENERS OR MORE TO ASSURE STABILITY

6I-02
ROOF FRAMING PLAN

0 1 2 4 6 8
SCALE IN FEET

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS
4/28/83
6-29-84

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO.
6I

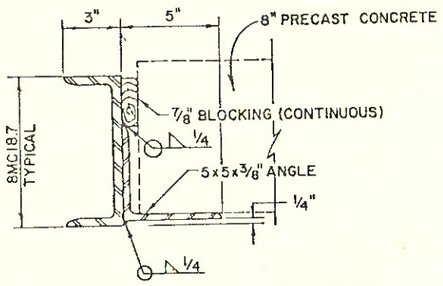
ARCHITECTS - WRIGHT ✓ KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO
ENGINEERS - JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TECHNOLOGIES BATTELLE / COLUMBUS LABORATORIES

DATE

GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

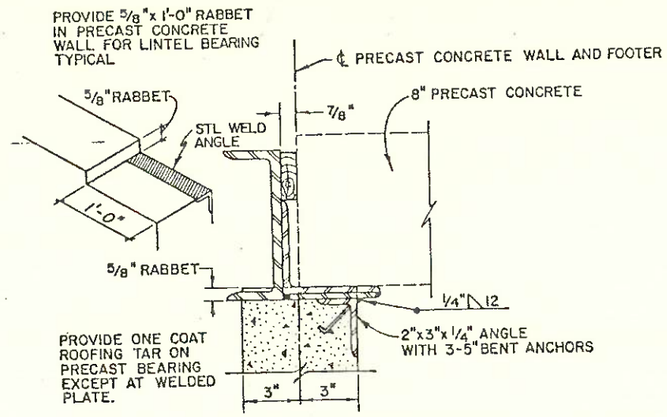
55
66



LINTEL-TYPICAL SECTION

NOT TO SCALE

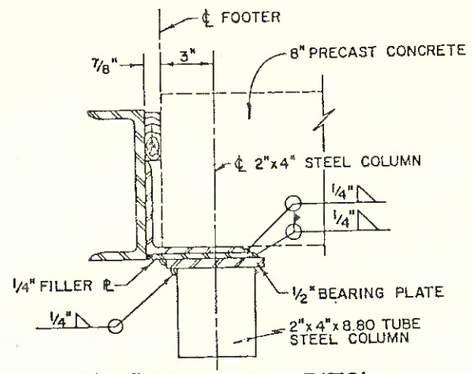
6J-01



STEEL LINTEL / PRECAST BEARING DETAIL-TYPICAL

NOT TO SCALE

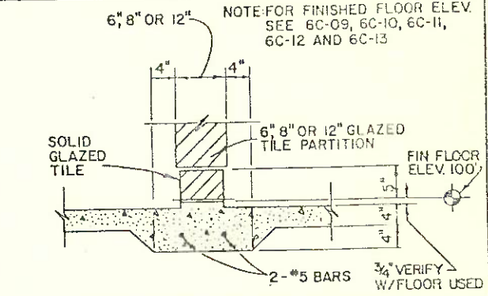
6J-04



2"x4" COLUMN CAPITOL ASSEMBLY-TYPICAL

NOT TO SCALE

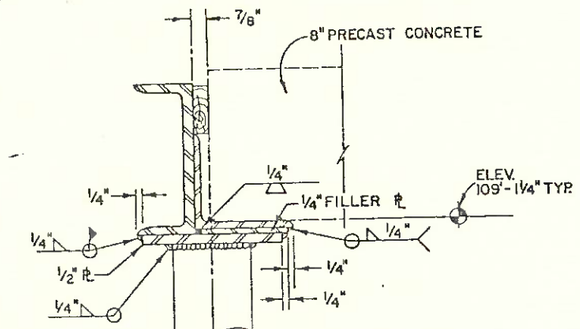
6J-07



6", 8" OR 12" GLAZED TILE WALL FOOTER-TYPICAL

NOT TO SCALE

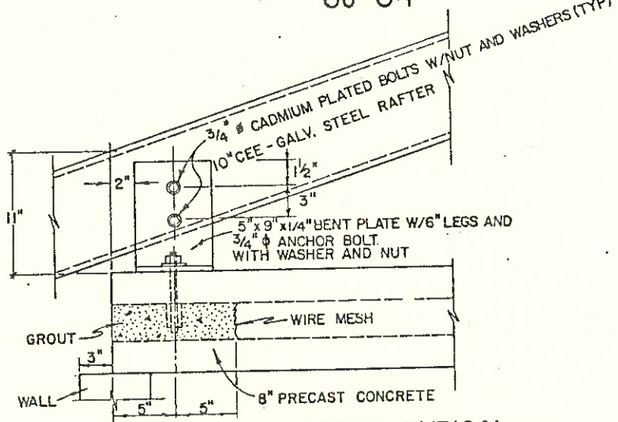
6J-10



COLUMN CAPITOL ASSEMBLY-TYPICAL

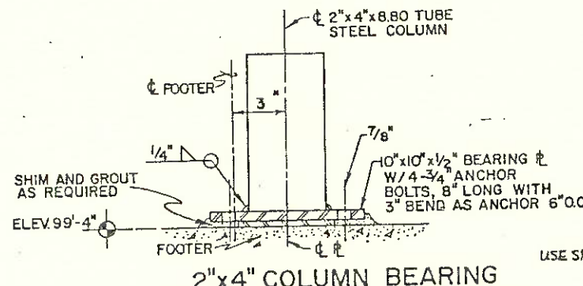
NOT TO SCALE

6J-02



RAFTER / WALL DETAIL-TYPICAL

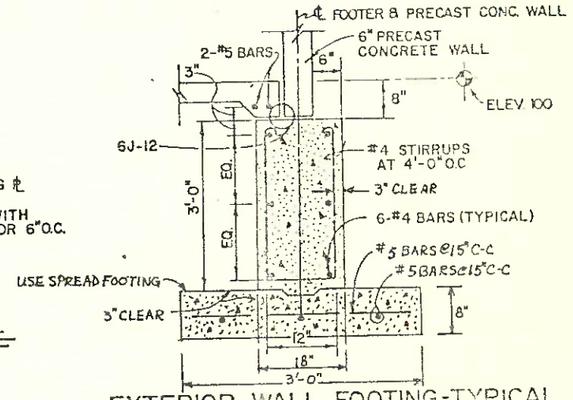
6J-05 NOT TO SCALE



2"x4" COLUMN BEARING PLATE ASSEMBLY-TYPICAL

NOT TO SCALE

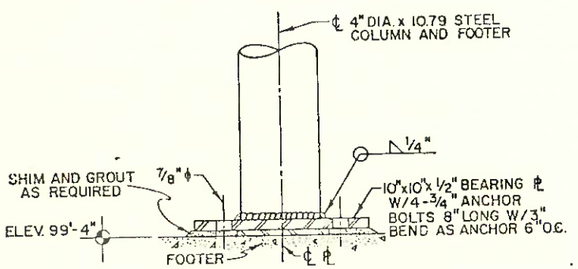
6J-08



EXTERIOR WALL FOOTING-TYPICAL

NOT TO SCALE

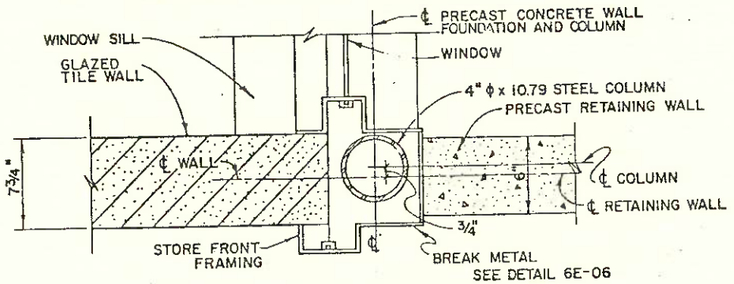
6J-11



COLUMN BEARING PLATE ASSEMBLY-TYPICAL

NOT TO SCALE

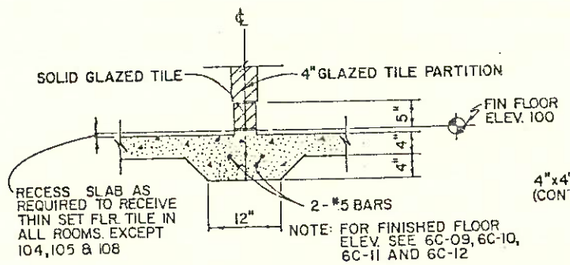
6J-03



COLUMN / WALL DETAIL-TYPICAL

NOT TO SCALE

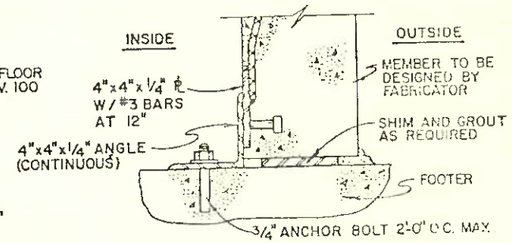
6J-06



4" GLAZED TILE WALL FOOTER-TYPICAL

NOT TO SCALE

6J-09



PRECAST CONCRETE WALL BASE DETAIL

NOT TO SCALE

6J-12

STRUCTURAL DETAILS

NOT TO SCALE

NOTE: PROVIDE A COATING OF ROOFING TAR BETWEEN ALL STEEL TO PRE-CAST JOINTS AND BEARING POINTS UNLESS OTHERWISE NOTED

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS
9-26-89

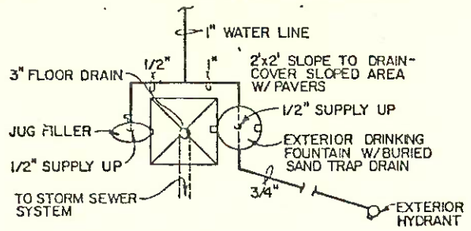
MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO.
6J

ARCHITECTS: WRIGHT, KRITSCHGAU, ASSOCIATES, INC. 3660 TRABUE RD., COLUMBUS, OHIO
ENGINEERS JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TE... BATTELLE / COLUMBUS LABORATORIES

DATE

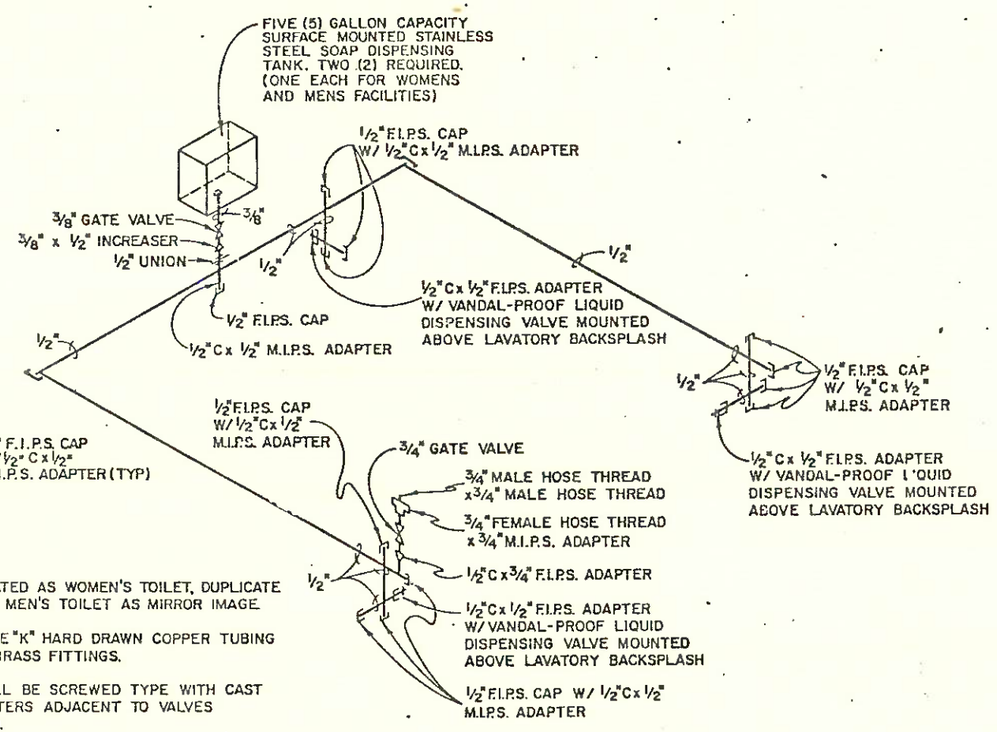
FOR CONTINUATION SEE 6K-01



NOTE: SEE SHEET 6F FOR SITE LOCATION

6K-03
EXTERIOR DRINKING FOUNTAIN, JUG FILLER AND HYDRANT PIPING PLAN

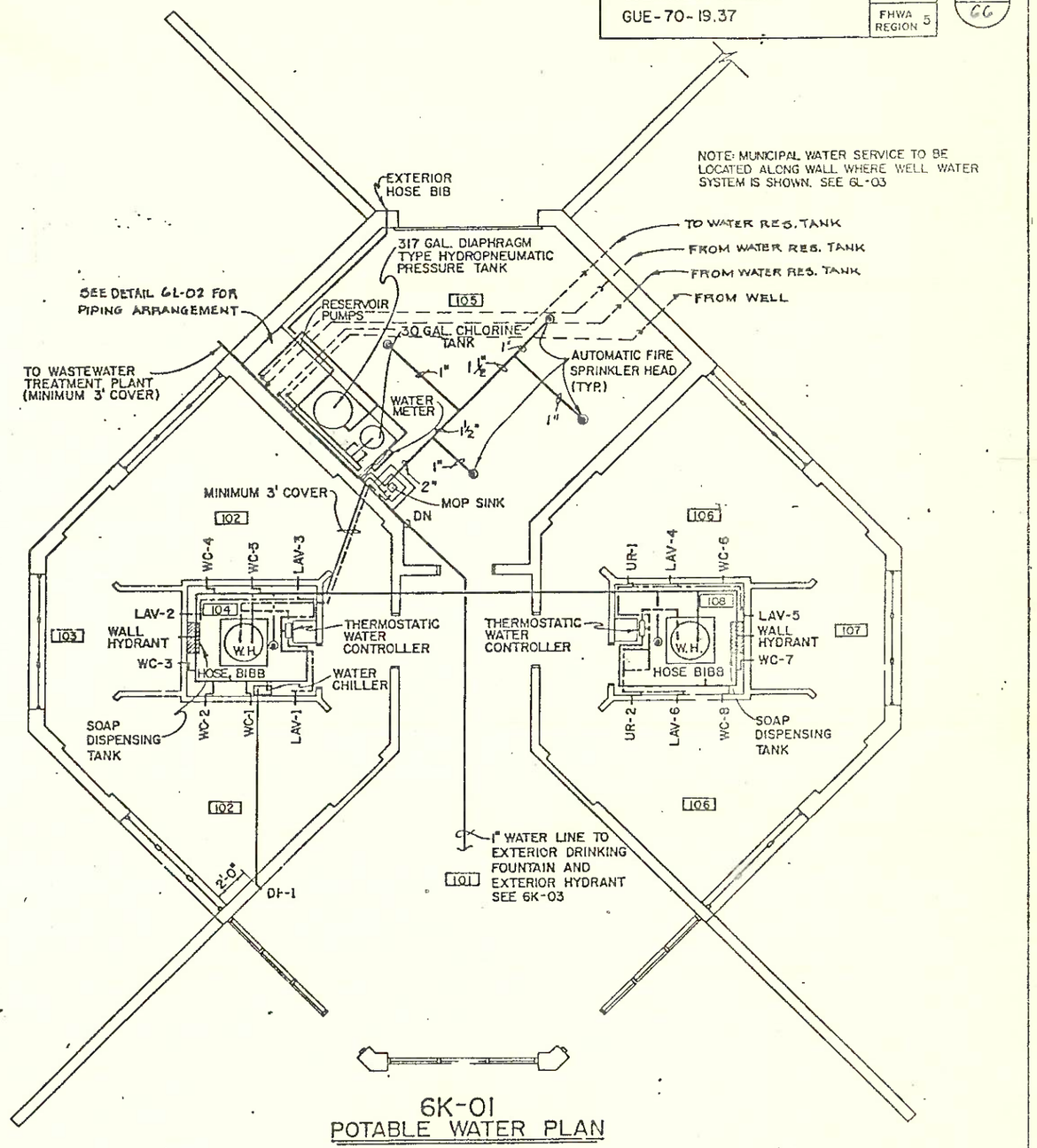
NOT TO SCALE



NOTE 1
PIPING INDICATED AS WOMEN'S TOILET, DUPLICATE SCHEME FOR MEN'S TOILET AS MIRROR IMAGE.
NOTE 2
USE 1/2" TYPE "K" HARD DRAWN COPPER TUBING WITH CAST BRASS FITTINGS.
NOTE 3
VALVES SHALL BE SCREWED TYPE WITH CAST BRASS ADAPTERS ADJACENT TO VALVES AS REQUIRED.
NOTE 4
MOUNT SOAP TANK AND PIPING ON WALLS ABOVE BACK VENT PIPING IN ROOMS 104 AND 108.

6K-02
LIQUID SOAP DISPENSING UNIT ISOMETRIC

NOT TO SCALE



6K-01
POTABLE WATER PLAN

0 1 2 4 6 8
SCALE IN FEET

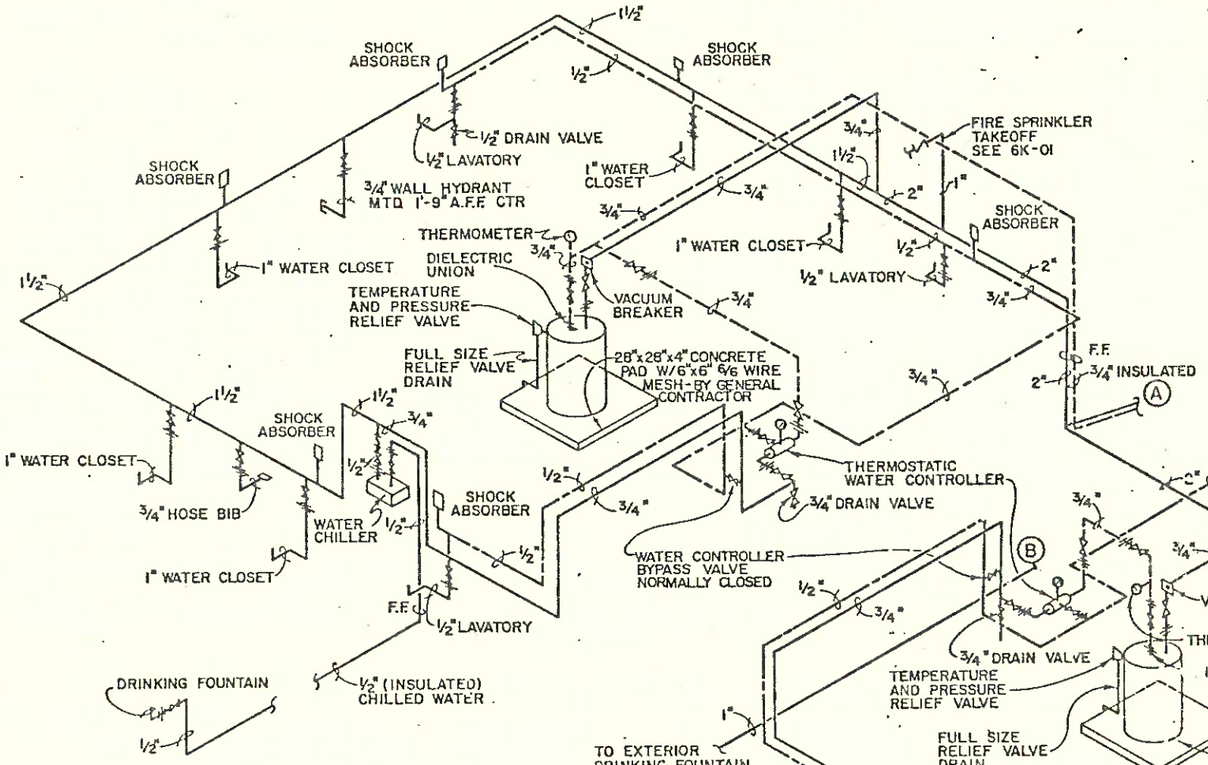
OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS		SHEET NO.
3-13-84 7-17-84	MOTORIST SERVICES BUILDING AND STORAGE UNITS	6K
	ARCHITECTS: WRIGHT / KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS: JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES: BATTELLE / COLUMBUS LABORATORIES	DATE

GUERNSEY COUNTY	OHIO
GUE - 70 - 19.37	FHWA REGION 5

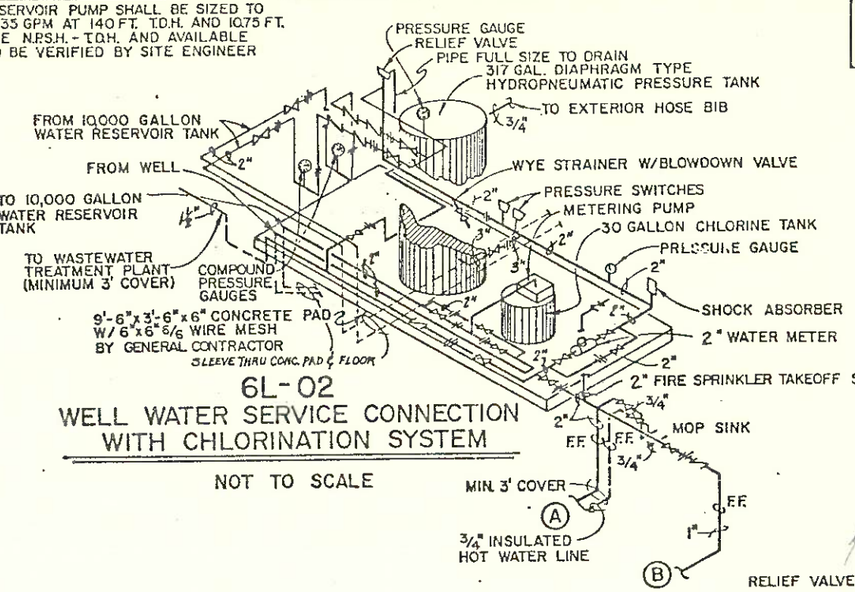
57
66

NOTE: EACH RESERVOIR PUMP SHALL BE SIZED TO DELIVER 35 GPM AT 140 FT. T.D.H. AND 10.75 FT. AVAILABLE N.P.S.H. - T.D.H. AND AVAILABLE N.P.S.H. TO BE VERIFIED BY SITE ENGINEER

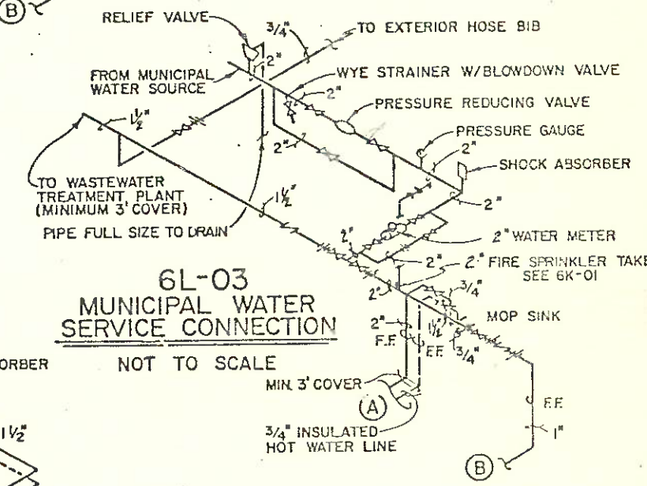


6L-01
POTABLE WATER ISOMETRIC
NOT TO SCALE

LEGEND
- TEMPERED WATER
- COLD WATER
- HOT WATER
- GATE VALVE
- CHECK VALVE
- GLOBE VALVE
- F.F. FINISHED FLOOR

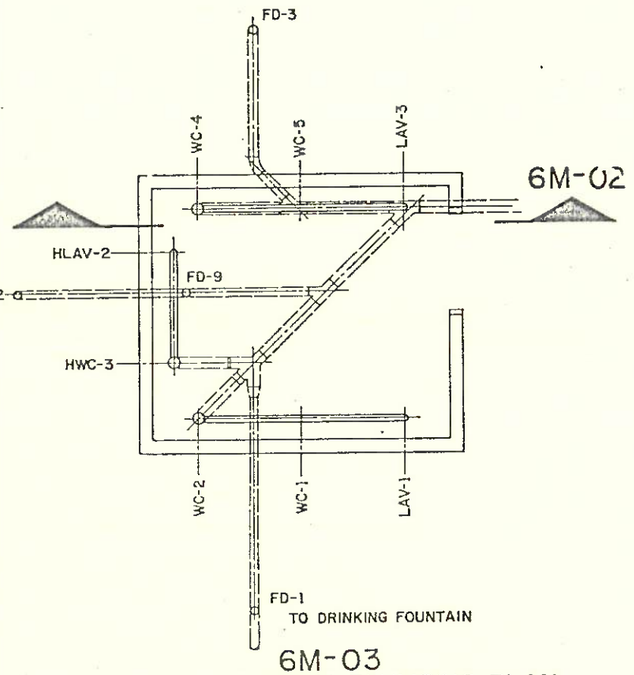


6L-02
WELL WATER SERVICE CONNECTION WITH CHLORINATION SYSTEM
NOT TO SCALE



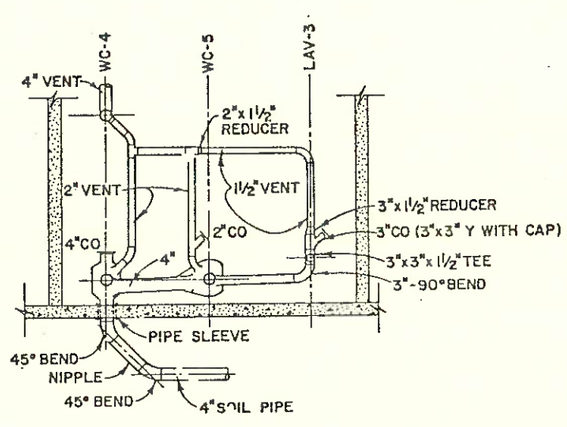
6L-03
MUNICIPAL WATER SERVICE CONNECTION
NOT TO SCALE

OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		
REVISIONS 3-6-84	MOTORIST SERVICES BUILDING AND STORAGE UNITS	SHEET NO. 6 L
	ARCHITECTS: WRIGHT / KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS: JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES: BATTELLE / COLUMBUS LABORATORIES	DATE



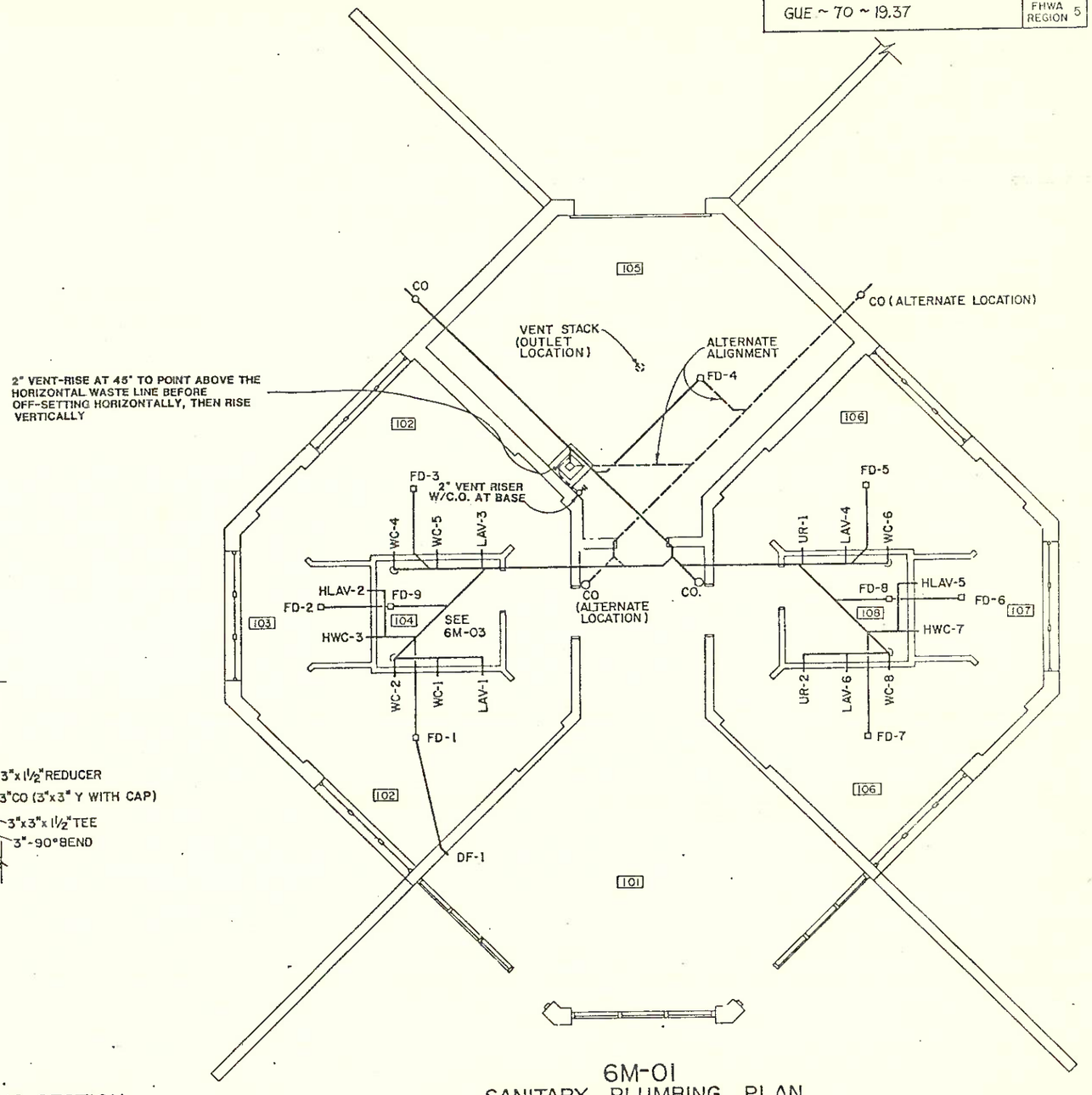
6M-03
TYPICAL SANITARY PLUMBING PLAN

NOT TO SCALE



6M-02
TYPICAL SANITARY PLUMBING SECTION

NOT TO SCALE



6M-01
SANITARY PLUMBING PLAN

0 1 2 4 6 8
SCALE IN FEET

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS
10-5-84

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO.
6 M

ARCHITECTS: WRIGHT / KNITSCHGAU, ASSOCIATES, INC.
3600 TRABUE RD., COLUMBUS, OHIO
ENGINEERS: JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TECHNOLOGIES: BATTELLE/COLUMBUS LABORATORIES

DATE

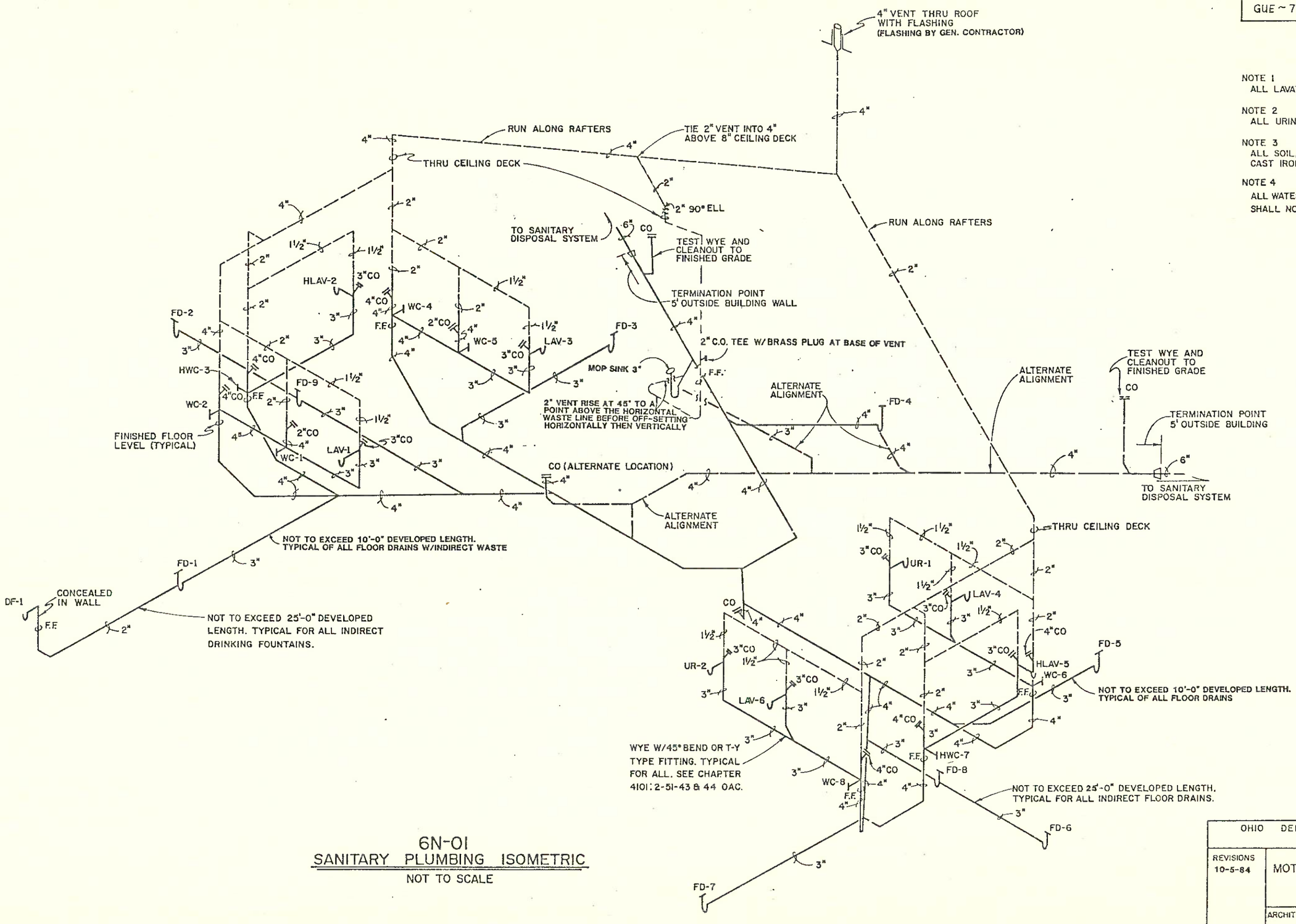
GUERNSEY COUNTY GUE ~ 70 ~ 19.37	OHIO FHWA REGION 5	59 66

NOTE 1
ALL LAVATORIES SHALL HAVE 1½" TRAPS.

NOTE 2
ALL URINALS SHALL HAVE 2" WASTE OUTLETS.

NOTE 3
ALL SOIL, WASTE AND VENT PIPING SHALL BE CAST IRON, NO HUB.

NOTE 4
ALL WATER TO HAND WASHING AND BATHING FACILITIES SHALL NOT EXCEED 120°F.



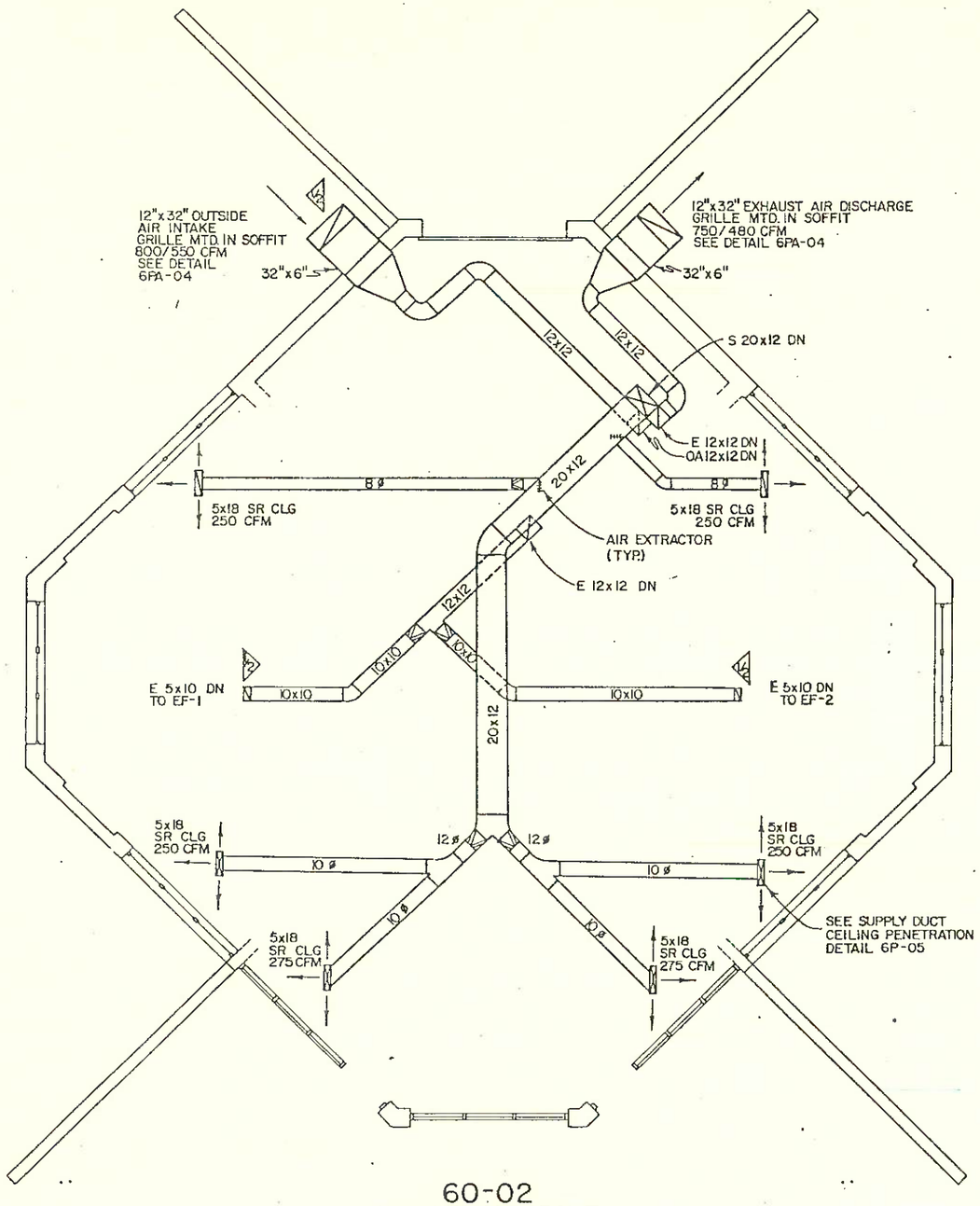
6N-01
SANITARY PLUMBING ISOMETRIC
NOT TO SCALE

OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS		
REVISIONS 10-5-84	MOTORIST SERVICES BUILDING AND STORAGE UNITS	SHEET NO. 6N
	ARCHITECTS · WRIGHT / KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS · JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES · BATTELLE / COLUMBUS LABORATORIES	DATE

GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

60
66

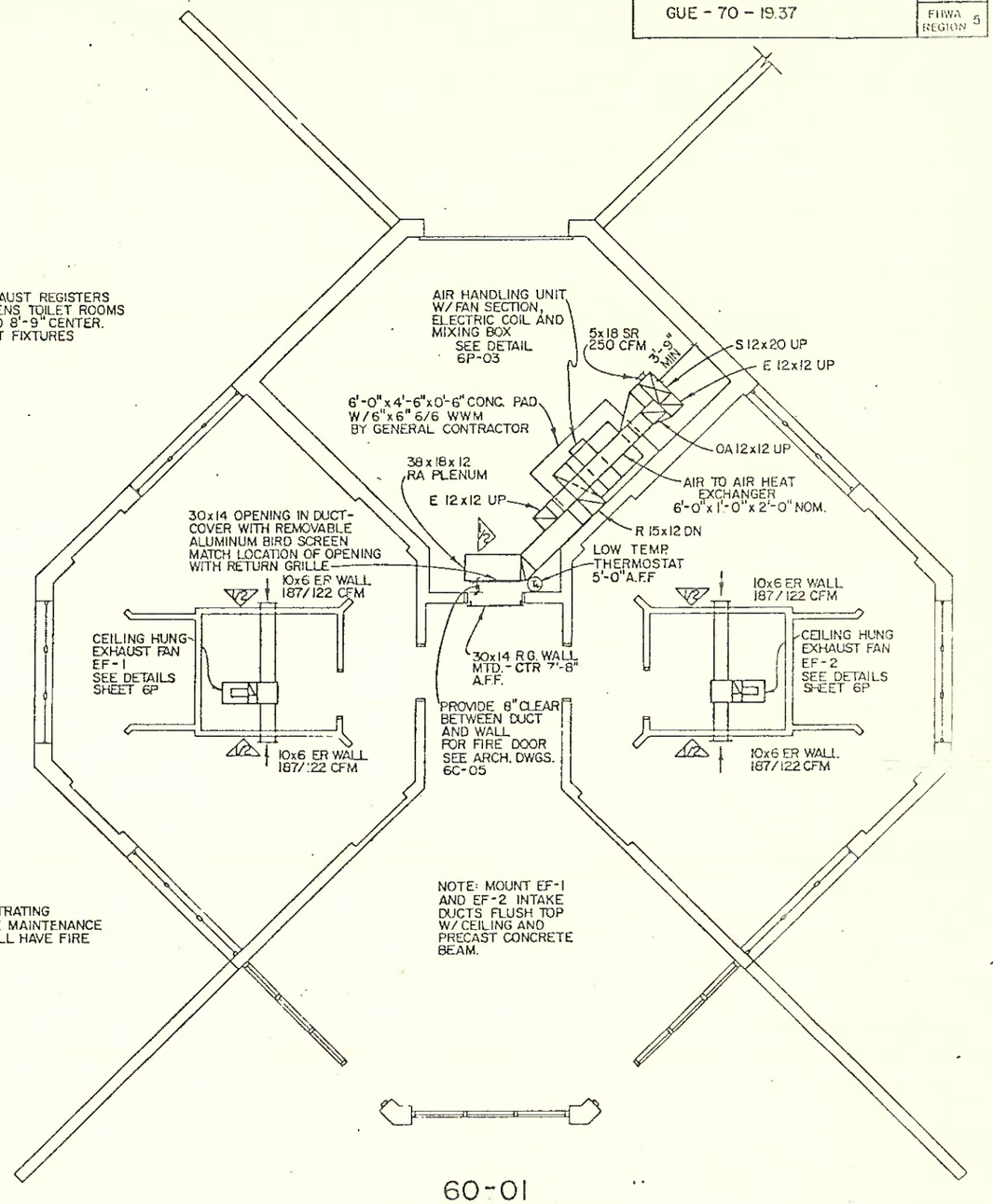


60-02
DUCT PLAN ABOVE CEILING DECK

0 1 2 4 6 8
SCALE IN FEET

NOTE: 10"x6" EXHAUST REGISTERS IN MENS AND WOMENS TOILET ROOMS SHALL BE MOUNTED 8'-9" CENTER. A.F.F. - ABOVE LIGHT FIXTURES

NOTE: ALL DUCTS PENETRATING THE CEILING DECK IN THE MAINTENANCE STORAGE ROOM 105 SHALL HAVE FIRE DAMPERS



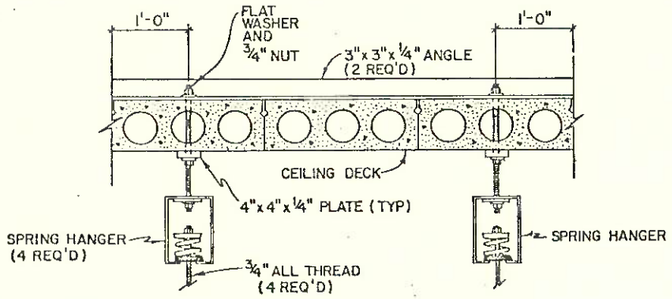
NOTE: MOUNT EF-1 AND EF-2 INTAKE DUCTS FLUSH TOP W/ CEILING AND PRECAST CONCRETE BEAM.

60-01
INTERIOR DUCT PLAN

0 1 2 4 6 8
SCALE IN FEET

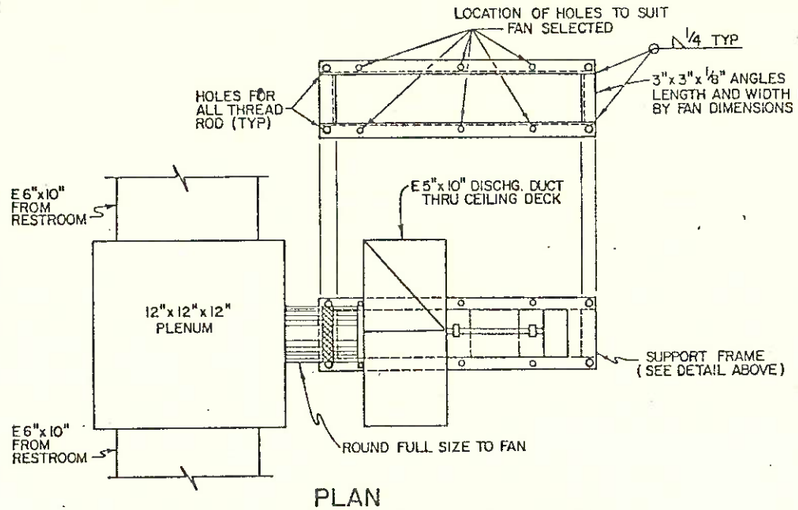
OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS		SHEET NO
7-17-84	MOTORIST SERVICES BUILDING AND STORAGE UNITS	60
	ARCHITECTS - WRIGHT / KRITSCHGAU, ASSOCIATES, INC 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS - JOHN FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNO BATTELLE / COLUMBUS LA	DATE



EXHAUST FAN HANGER DETAIL

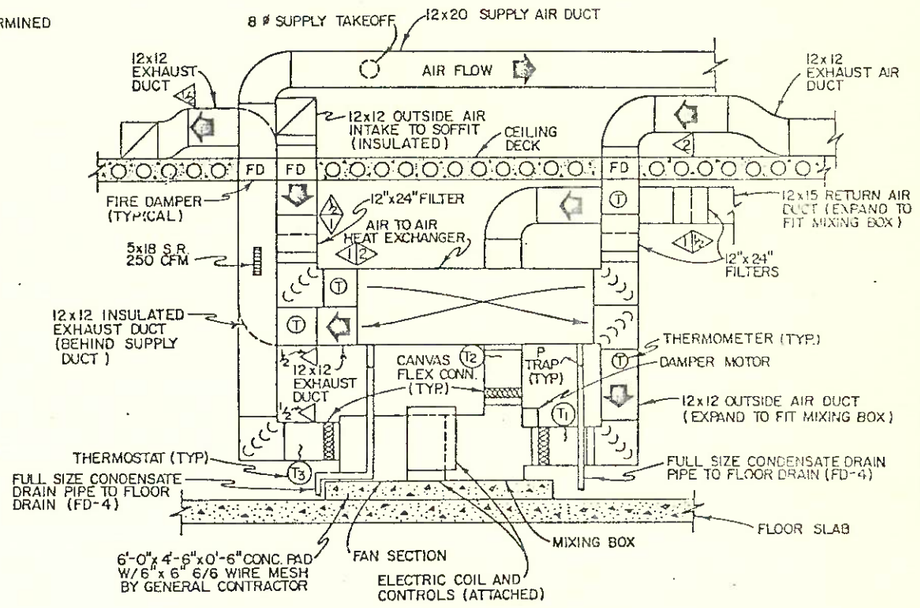
NOT TO SCALE
6P-01



PLAN

EXHAUST FAN AND SUPPORT FRAME DETAIL

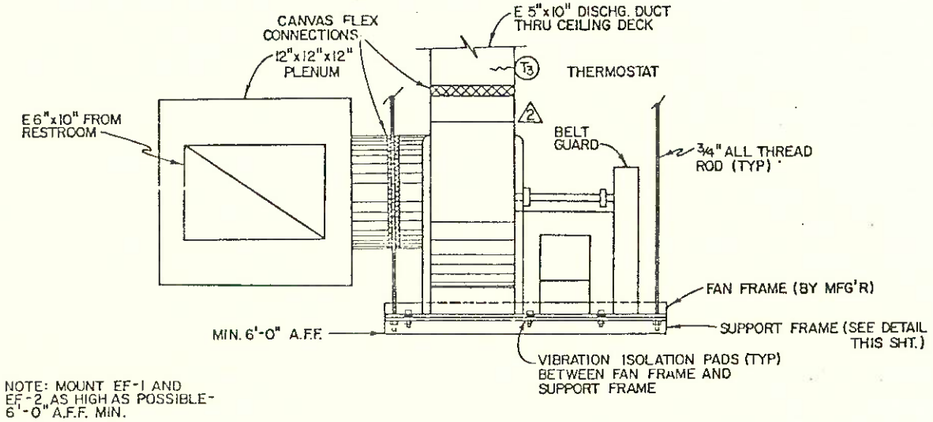
NOT TO SCALE
6P-02



HEATING SYSTEM ELEVATION

6P-03 NOT TO SCALE

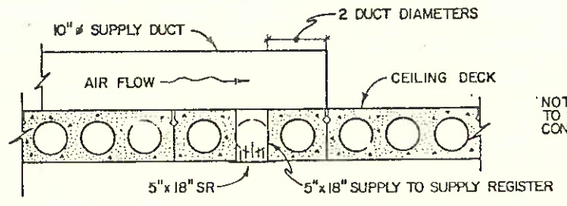
NOTE:
1.) MOUNT FAN SECTION, ELECTRIC COIL AND MIXING BOX ON VIBRATION ISOLATORS AS SPECIFIED.
2.) HANG AIR TO AIR HEAT EXCHANGER AS PER MANUFACTURERS RECOMMENDATIONS AND EXHAUST FAN HANGER DETAIL (THIS SHT.)
3.) CEILING DECK VAPOR BARRIER AND INSULATION SHALL BE PLACED OVER THE DUCTWORK
4.) MOUNT AIR TO AIR HEAT EXCHANGER TO DUCT USING COMPANION FLANGES W/BOLTS.
5.) EXPAND DUCT AT FILTER SECTIONS TO ACCOMODATE 12"x24" FILTER. PROVIDE ACCESS DOOR PER SMACNA STANDARDS FOR EACH FILTER.



NOTE: MOUNT EF-1 AND EF-2 AS HIGH AS POSSIBLE- 6'-0" A.F.F. MIN.

ELEVATION EXHAUST FAN DETAIL

NOT TO SCALE
6P-04



NOTE: CEILING DECK OPENINGS TO BE PROVIDED BY PRECAST CONCRETE SUPPLIER

TYPICAL SUPPLY DUCT CEILING PENETRATION

NOT TO SCALE
6P-05

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

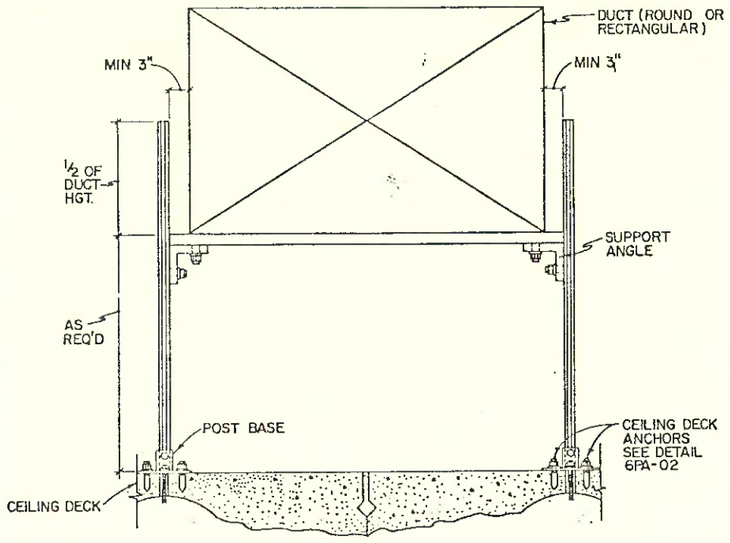
REVISIONS

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO. 6P

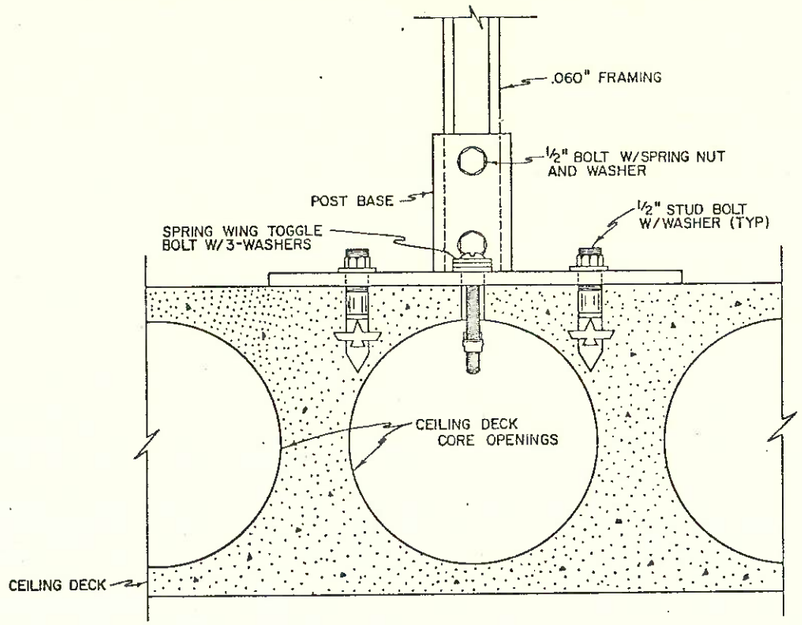
DATE

ARCHITECTS · WRIGHT ✓ KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO
ENGINEERS · JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TECHNOLOGIES · BATTELLE / COLUMBUS LABORATORIES



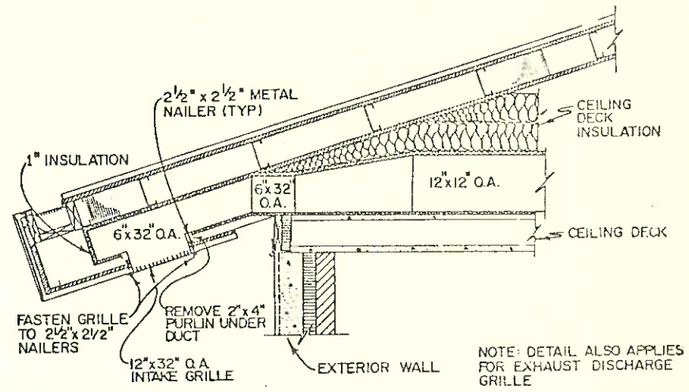
TYPICAL DUCT SUPPORT DETAIL

NOT TO SCALE
6PA-01



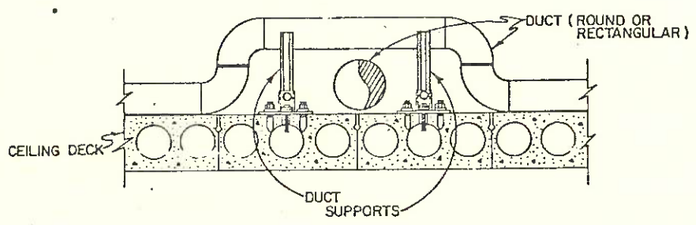
TYPICAL CEILING DECK ANCHOR DETAIL

NOT TO SCALE
6PA-02



OUTSIDE AIR INTAKE DETAIL

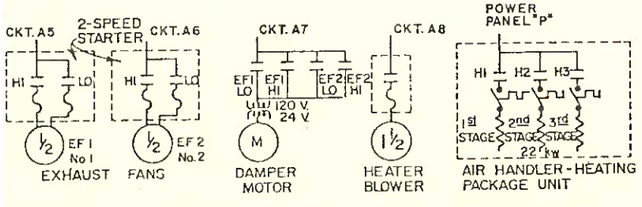
NOT TO SCALE
6PA-04



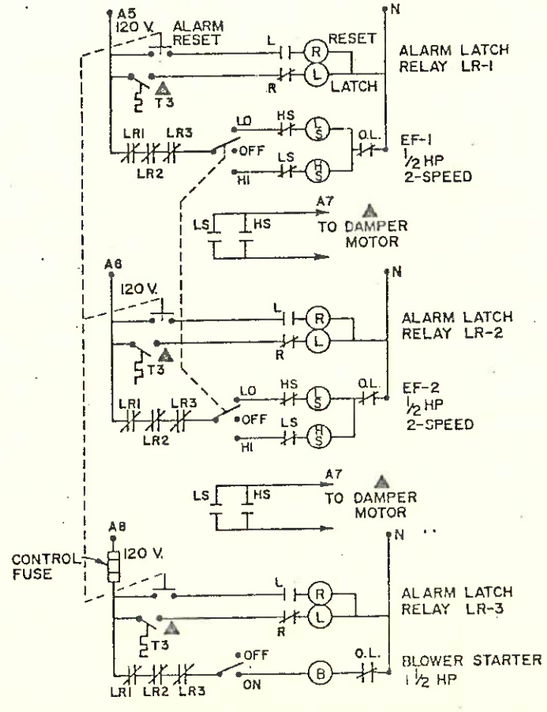
TYPICAL DUCT INTERSECTION SUPPORT DETAIL

NOT TO SCALE
6PA-03

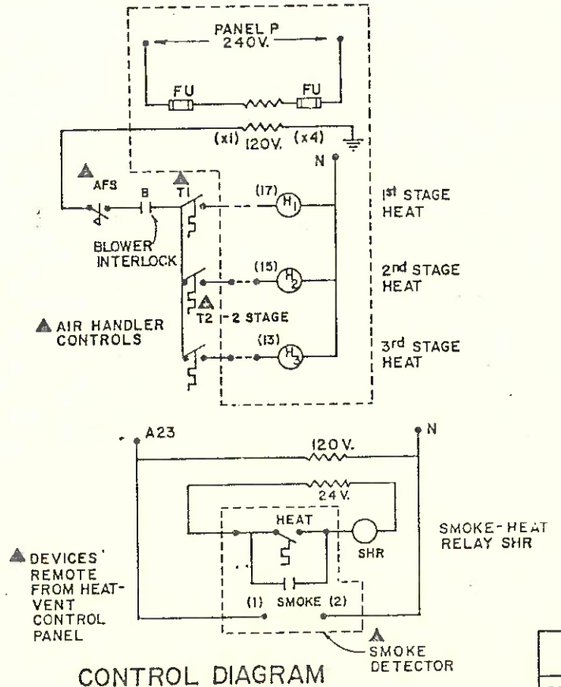
NOTE: 1) CEILING DECK INSULATION SHALL BE PLACED OVER ALL DUCT WORK
2) WHENEVER POSSIBLE REST DUCT DIRECTLY ON CEILING DECK.
3) PROVIDE DUCT SUPPORTS EVERY 8'-0" ON DUCTS THAT DO NOT REST ON CEILING DECK
4) PROVIDE DUCT SUPPORTS AS DETAILED FOR INTERSECTING DUCTS



H & V POWER DIAGRAM 6PA-05



NOTE: 1) HEAT-VENT CONTROL PANEL FURNISHED UNDER ELECTRICAL WORK



CONTROL DIAGRAM HEAT-VENT CONTROL PANEL

NOT TO SCALE
6PA-06

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS

MOTORIST SERVICES AND STORAGE UNITS

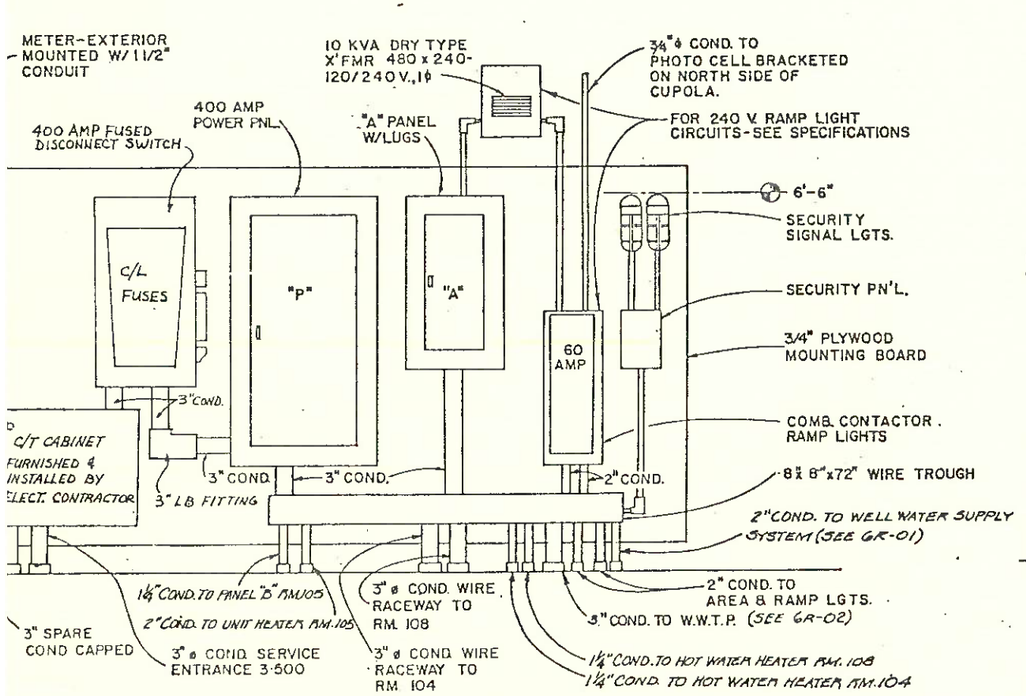
SHEET NO

ARCHITECTS-WRIGHT-V KRITSCHGAU, ASSOCIATES, INC.
3600 TRABUE RD., COLUMBUS OHIO
ENGINEERS-JOHN E FOSTER & ASSOCIATES, COLUMBUS
ENERGY TECHNOLOGIES-BATTELLE/COLUMBUS LABS

DATE

FIXTURE DEVICE SYMBOL SCHEDULE

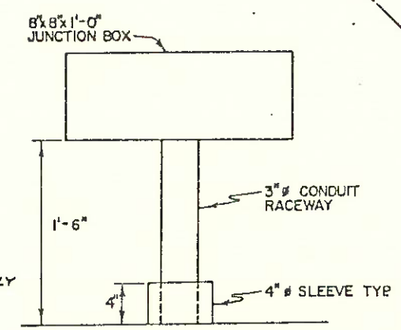
MARK	SYMBOL	FIXTURE/DEVICE	MANUFACTURE-NUMBER	MOUNTING HEIGHT	REMARKS
A		FLUSH UP LITE	HYDREL 6062 MV 175/240 HPF	FLUSH AT GRADE	W/ 6111 AND ,6174, SEE NOTE 175 W. MV.
B		RECESS-SOFFIT LITE	MARCO HN 633 404/06/355240	SOFFIT	VANDAL RESISTANT LENS 150W HPS-55 VOLT LAMP
C		SURFACE-CEILING LITE	MARCO LN 708004/35/40 D 240	9'-1"	175 W. MH.
D		FLUORESCENT LITE	LITHONIA WA 240 A	9'-1"	2-40 WATT, WATT-MISER II & ENERGY SAVING BALLAST
E		FLUORESCENT LITE	KENALL 7170-DW-9518	8'-1"	1-40 WATT, WATT-MISER II & ENERGY SAVING BALLAST
F		FLAGPOLE UP/DN	NL DK-1210/175/LTFP-240 V.	10'-0" AFG	2 REQ'D. R-40 LAMP
	$ $_3$	SWITCH-3 WAY		4'-6" AFF	SURFACE MOUNTED
		SWITCH-RAISE/LOWER		4'-6" AFF	
		DUPLEX RECEPTACLE		2'-0" AFF	
		JUNCTION BOX			
		TELEPHONE OUTLET		4'-6" AFF	HANDICAPPED 30" AFF
	DSS	DOOR SECURITY SWITCH			
		SMOKE & HEAT DETECTOR		CEILING	
		CONDUIT-UNDERGROUND			
		CONDUIT-SURFACE			
		CONDUIT-OVERHEAD		ABOVE CEILING DECK	



ELECTRICAL PANEL ELEVATION

NOT TO SCALE

6Q-01



JUNCTION BOX·· ELEVATION ROOMS 104 & 108 (TYP)

NOT TO SCALE

6Q-02

6Q-03 LIGHTING PLAN

SCALE IN FEET 0 1 2 4 6 8

◇1 POWER PEDESTAL W/ RECEPTACLE

◇2 FLAG POLE W/ LIGHTS (4)

GUERNSEY COUNTY
GUE - 70 - 19.37

OHIO
FHWA REGION 5

63/66

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION 5 HIGHWAYS

REVISIONS
4/28/83
3/7/84
7/7/84

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO. 6Q

ARCHITECTS: WRIGHT V KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO
ENGINEERS: JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TECHNOLOGIES: BATTELLE/COLUMBUS LABORATORIES

DAT

GUERNSEY COUNTY
GUE-70-19.37

64/66

6QA-01
ELECTRICAL NOTES

1. POWER RECEPTACLE PEDESTAL

EQUAL TO SQUARE D #PAK 13P 60 INCH HIGH RAINPROOF PEDESTAL SET 25 INCHES IN THE GROUND AND CONCRETE ENCASED BELOW GRADE. PROVIDE A 30 AMPERE RECEPTACLE WITH A 30 AMPERE, 1 POLE GFI BREAKER. INCLUDE PROVISION FOR PADLOCKING. SEE LANDSCAPE ARCHITECTURE DRAWING 6F FOR LOCATION ADJACENT TO FLAGPOLE.

2. FLAGPOLE AND AREA LIGHTING

EXTEND 1¼" CONDUIT BELOW FLAGPOLE FOUNDATION AND ENTER FROM BOTTOM (48" BELOW GRADE). EXTEND TO 45" ABOVE GRADE. MOUNT LIGHTS 10' ABOVE GRADE AS PER MANUFACTURER'S RECOMMENDATIONS. UTILIZE WINCH ENTRY FOR ACCESS.

3. TELEPHONE OUTLET MOUNTING HEIGHT

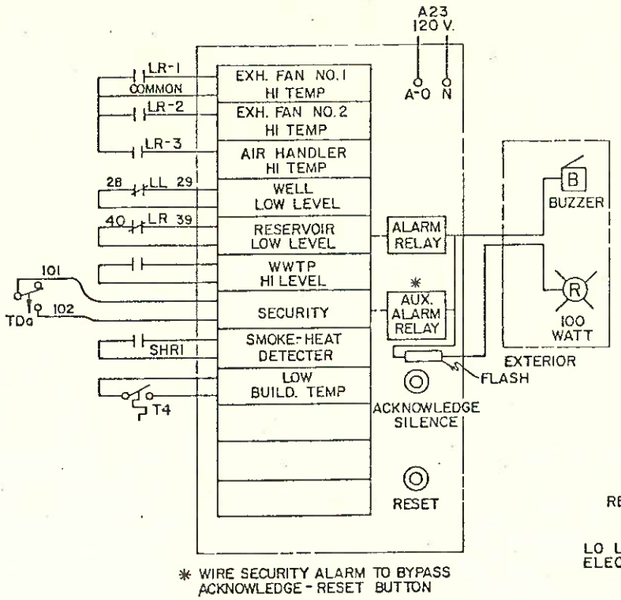
VERIFY TELEPHONE MOUNTING HEIGHT WITH LOCAL TELEPHONE COMPANY AND COORDINATE WITH TILE CONTRACTOR.

4. INSTALLATION OF ELECTRIC OUTLET BOXES AND CONDUIT

CONDUITS SHALL BE CONCEALED IN ALL AREAS EXCEPT ROOMS 104, 105, AND 108 WHERE CONDUITS AND DEVICES SHALL BE SURFACE MOUNTED.

5. DOOR SECURITY SWITCH - RM. 101, DDS-2

FURNISH & INSTALL EDWARDS NO. 502 DOOR SW. IN DOOR JAMB CUTOUT. EXTEND 1/2" CONDUIT TO SECURITY PANEL. USE 1/2" FLEXIBLE CONDUIT FOR CONNECTION TO JAMB SWITCH. ROUTED TO J.B. ABOVE CLG.

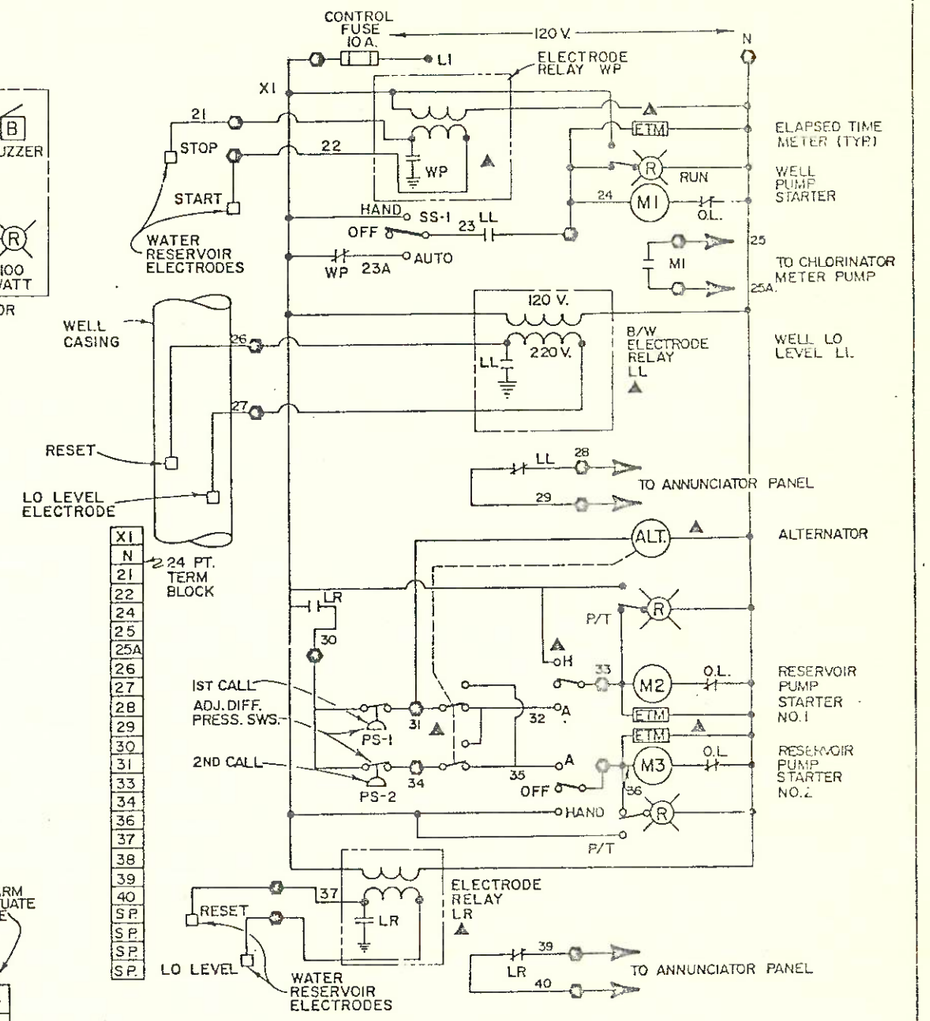


* WIRE SECURITY ALARM TO BYPASS ACKNOWLEDGE - RESET BUTTON

ALARM ANNUNCIATOR PANEL

NOT TO SCALE

6QA-02



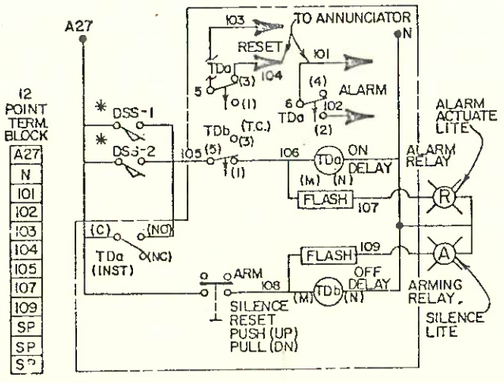
▲ DEVICES LOCATED IN CONTROL PANEL

⬡ PANEL TERMINAL BLOCK

WELL RESERVOIR CONTROL PANEL

NOT TO SCALE

6QA-04

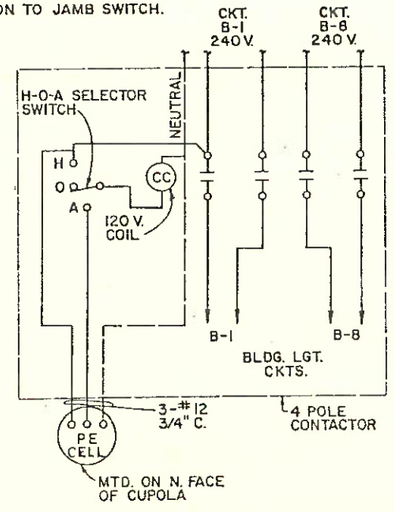


* SECURITY ALARM DOOR SWITCH CONTACTS CLOSE WHEN DOOR OPENS.

SECURITY PANEL

NOT TO SCALE

6QA-03



PE CONTROLLED BLDG. LGT. CKTS.

NOT TO SCALE

6QA-05

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS		SHEET NO.
9-26-84	MOTORIST SERVICES BUILDING AND STORAGE UNITS	6QA
	ARCHITECTS: WRIGHT, KRITSCHGAU, ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO ENGINEERS: JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO ENERGY TECHNOLOGIES: BATTELLE/COLUMBUS LABORATORIES	DATE

GUERNSEY COUNTY
GUE-70-19.37

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FHWA REGION 5

65
66

PANEL "A" LITE SCHEDULE

225 AMP 42 POLE 120/240 VOLT 1 PHASE 60 HERTZ 3 WIRE S/N W/MAIN LUGS ONLY

CIRCUIT NO.	PANEL POSITION	BREAKER POLES/AMPS	DESCRIPTION	LOCATION	VOLTS	HP/FLA	WIRE SIZE	CONDUIT SIZE	CONNECTED WATTAGE	REMARKS
1	1-3	2-20	SPARE		240					
2	2-4	2-60	RAMP-AREA LITES	RM 105	240	41.5	4	2	10,000	CONTROL CONTACTOR
3	5-7	2-20	SPARE		240					
4	6-8	2-20	SPARE		240					
5	9	1-20	EXH. FAN *1	104	120	10	12	¾"	1200	TO H & V PANEL
6	10	1-20	EXH. FAN *2	108	120	10	12	¾"	1200	TO H & V PANEL
7	11	1-20	DAMPER	105	120V.	.5	12	¾"	60	TO H & V PANEL
8	12	1-30	BLOWER	105	120V.	20	10	¾"	2400	TO H & V PANEL
9	13-15	2-20	HAND DRYER	RM 103	240	10	12	3/4	2400	*
10	14-16	2-20	HAND DRYER	RM 107	240	10	12	3/4	2400	*
11	17	1-20	CHLORINATOR	RM 105	120	5.8	12	3/4	700	
12	18	1-20	SPARE		120					
13	19	1-20	CHILLER	RM 104	120	5.3	12	3/4	630	* FOR WATER FOUNTAIN
14	20	1-20	SPARE		120					
15	21	1-20	RECEPTACLE	RM 102, 103, 104	120	8.3	12	3/4	1000	*GFI BREAKER
16	22	1-20	RECEPTACLE	RM 106, 107, 108	120	8.3	12	3/4	1000	*GFI BREAKER
17	23	1-20	RECEPTACLE, DOOR	RM 105	120	8.3	12	3/4	1000	GFI BREAKER
18	24	1-20	RECEPTACLE	RM 101	120	8.3	12	3/4	1000	
19	25-27	2-20	HAND DRYER	RM 102	240	10	12	3/4	2400	*
20	26-28	2-20	HAND DRYER	RM 106	240	10	12	3/4	2400	*
21	29-31	2-20	HAND DRYER	RM 102	240	10	12	3/4	2400	*
22	30-32	2-20	HAND DRYER	RM 106	240	10	12	3/4	2400	*
23	33	1-20	SMOKE DETECTOR	RM 105	120	3	12	3/4	360	
24	34	1-30	RECEPTACLE	RM 101	120	8.3	10	3/4	1000	
25	35	1-30	RECEPTACLE, POWER PEDESTAL	EXTERIOR	120	13.3	10	1¼	1600	GFI BREAKER AT RECEPTACLE
26	36	1-15	SPARE		120					
27	37-39	2-30	SPARE		240					
28	38-40	2-30	SPARE		240					
29	41-42	2-30	SPARE		240					

* DENOTES CKTS. ROUTED IN RESTROOM SERVICE RACEWAYS

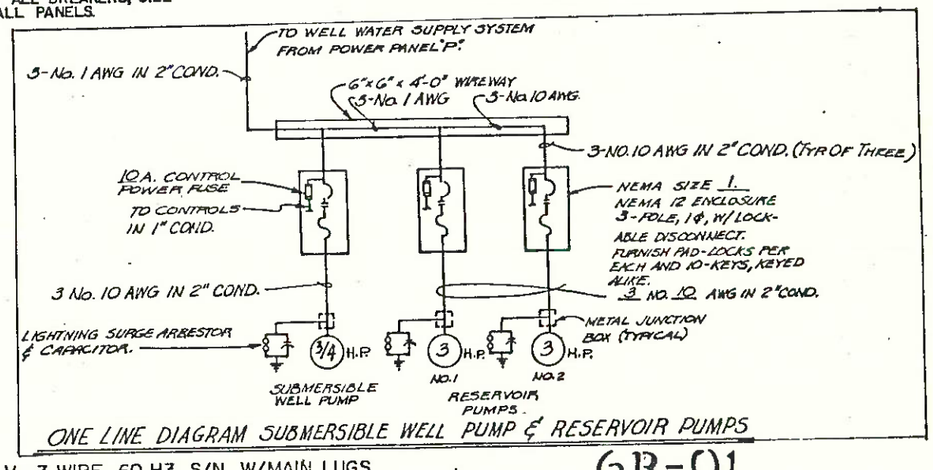
PANEL "B" LITE SCHEDULE

100 AMP 20 POLE 120/240 VOLT 1 PHASE 60 HERTZ 3 WIRE S/N W/MAIN LUGS ONLY

CIRCUIT NO.	PANEL POSITION	BREAKER POLES/AMPS	DESCRIPTION	LOCATION	VOLTS	HP/FLA	WIRE SIZE	CONDUIT SIZE	CONNECTED WATTAGE	REMARKS
1	1-3	2-20	OVERHANG	RM 101	240	7.3	10	3/4	1750	PE CONTROLLED
2	2	1-20	CEILING LITES	RM 104, 105 108	120	4.1	12	3/4	500	—
3	4	1-20	SPARE		120					—
4	5	1-20	SPARE		120					—
5	6	1-20	TOILET-LITES	RM 102, 106, 107	120	5.7	12	3/4	680	CONTINUOUS
6	7	1-20	TOILET-LITES	RM. 102, 103 106	120	5.7	12	3/4	680	CONTINUOUS
7	8-9	2-20	CEILING LITES	RM 101	240	1.8	12	3/4	400	CONTINUOUS
8	10-11	2-20	CLG. GRD, FLAG	RM. 101 & EXTERIOR	240	10.0	12	¾, 1¼, 1¼	2400	PE CONTROLLED
9	12	1-20	SPARE		120					
10	13	1-20	SPARE		120					
11	14-15	2-20	SPARE		120					
12	16	1-20	SPARE		120					
13	17	1-20	SPARE		120					
14	18-19	2-20	SPARE		240					
15	20	1-20	SPARE		120					

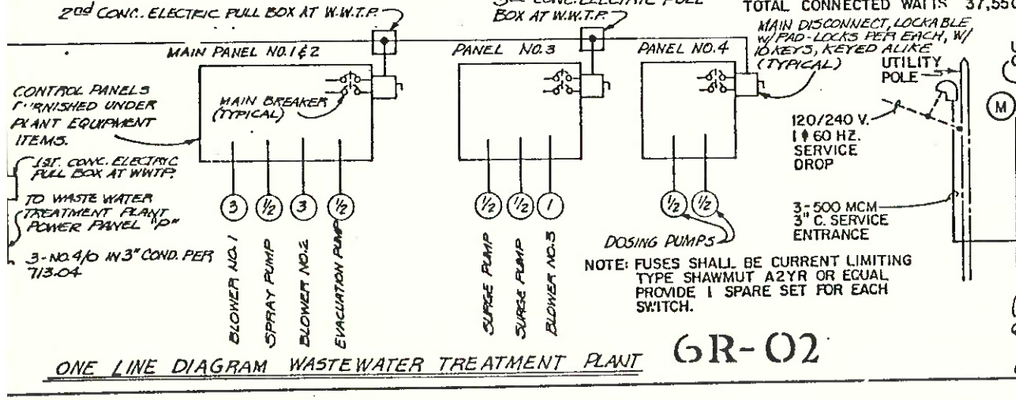
TOTAL CONNECTED WATTS . 6410

NOTE: FURNISH AND INSTALL ALL BREAKERS, SIZE AND POLES AS SHOWN FOR ALL PANELS.



ONE LINE DIAGRAM SUBMERSIBLE WELL PUMP & RESERVOIR PUMPS

6R-01



ONE LINE DIAGRAM WASTEWATER TREATMENT PLANT

6R-02

TOTAL CONNECTED WATTS 37,550

MAIN DISCONNECT, LOCKABLE W/ PAD-LOCKS PER EACH, W/ 10 KEYS, KEYED ALIKE (TYPICAL)

UTILITY POLE

120/240 V. 1Φ 60 HZ. SERVICE DROP

3-500 MCM 3" C. SERVICE ENTRANCE

NOTE: FUSES SHALL BE CURRENT LIMITING TYPE SHAWMUT A2YR OR EQUAL. PROVIDE 1 SPARE SET FOR EACH SWITCH.

UTILITY METER C/T CABINET

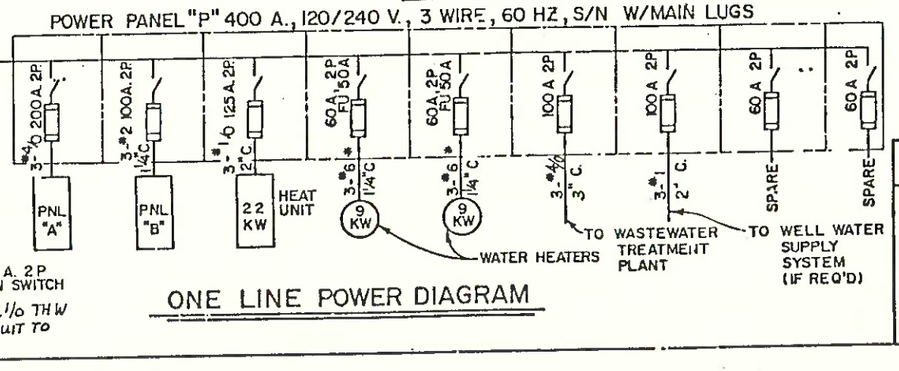
M

L.A.

400 A. 2P MAIN SWITCH

GROUND, ONE NO. 1/0 THW IN 1-INCH CONDUIT TO GROUND ROD.

POWER PANEL "P" 400 A., 120/240 V., 3 WIRE, 60 HZ, S/N W/MAIN LUGS



ONE LINE POWER DIAGRAM

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

REVISIONS
3-13-84
7-17-84
12-13-84

MOTORIST SERVICES BUILDING AND STORAGE UNITS

SHEET NO. 6R

ARCHITECTS: WRIGHT / KRIECHBAUM & ASSOCIATES, INC. 3600 TRABUE RD., COLUMBUS, OHIO
ENGINEERS: JOHN E. FOSTER & ASSOCIATES, COLUMBUS, OHIO
ENERGY TECHNOLOGIES: BATTELLE/COLUMBUS LABORATORIES

DATE

SOIL PROFILE

FHWA REGION	STATE	PROJECT	
5	OHIO		

66/66

GUERNSEY COUNTY
GUE - 70 - 19.37

6/11

State of Ohio
Department of Transportation
Division of Highways
Testing Laboratory

LOG OF BORING

Date Started 1-10-83 Sampler Type SS Dia 1 3/8" Water Elev 922.6'
Date Completed 1-10-83 Casing Length Dia

Project Identification GUERNSEY
GUE - 70 - 19.37 (EB)
SUBSURFACE INVESTIGATION
RENOVATION TO MOTORIST FACILITIES

Boring No Station & Offset TEST LOCATION 1A - (WET AREA) Surface Elev 937.5'

Elev	Depth	Std. Pen. (in)	Description	ALLOW BRNG CAP TSF	Field No	Lab No. So	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
937.5	0		SOD AND TOPSOIL												
937.0	1		REDDISH BROWN CLAY												
935.0	2	3/6/9	BROWN WITH GRAY SILTY CLAY	2.0	1	31468	2	4	11	41	42	40	16	19	A-6b
932.8	5	4/7/14	BROWN WITH GRAY SILT AND CLAY	2.7	2	31469	10	1	6	50	33	38	14	18	A-6a
930.0	7	10/16/21	BROWN WITH GRAY SANDY GRAVELLY SILT	3.5	3	31470	28	11	14	30	17	32	8	16	A-4a
927.8	10	21/30	BROWN WITH GRAY STONE FRAGMENTS WITH SAND AND FINES	10.0	4	31471	47	10	8	22	13	-	-	12	VISUAL
	12		TOP OF ROCK												
922.5	15	50(0.5')	BROWN AND GRAY WEATHERED CLAY SHALE	-	5	31472	60	10	7	14	9	-	-	11	VISUAL
917.5	20	50(0.5')	GRAY CLAY SHALE	-	6	31473	71	9	5	9	6	-	-	4	VISUAL
917.0			BOTTOM OF BORING												

Form TE-63 Particle Sizes: Aggr. >2.00mm Coarse Sand=2.00-0.42mm Fine Sand=.42-0.074mm Silt=0.074-0.005mm Clay=< 0.005mm

State of Ohio
Department of Transportation
Division of Highways
Testing Laboratory

LOG OF BORING

Date Started 1-11-83 Sampler Type SS Dia 1 3/8" Water Elev 921.7'
Date Completed 1-12-83 Casing Length Dia

Project Identification GUERNSEY
GUE - 70 - 19.37 (EB)
SUBSURFACE INVESTIGATION
RENOVATION TO MOTORIST FACILITIES

Boring No 2 Station & Offset TEST LOCATION A Surface Elev 936.4'

Elev	Depth	Std. Pen. (in)	Description	ALLOW BRNG CAP TSF	Field No	Lab No. So	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
936.4	0		SOD AND TOPSOIL												
935.9	1		REDDISH BROWN CLAY AND SILT												
933.9	3	3/4/3	REDDISH-BROWN SILTY CLAY	0.6	14	31481	13	3	4	40	40	39	17	22	A-6b
931.4	5	1/5/7	REDDISH-BROWN SILTY CLAY WITH COAL BLOSSOM	1.5	15	31482	0	3	8	34	55	40	17	24	A-6b
928.9	8	3/4/13	BROWN WITH GRAY SILT AND CLAY	2.1	16	31483	0	6	9	46	39	34	12	21	A-6a
926.4	10	10/24/47	BROWN WITH GRAY SILT AND CLAY	4.0	17	31484	7	3	6	51	33	32	11	12	A-6a
	12		TOP OF ROCK												
921.4	15	61(0.5')	BROWN AND GRAY WEATHERED SHALE CLAY		18	31485	50	13	8	14	15	-	-	9	VISUAL
920.9			BOTTOM OF BORING												

Form TE-63 Particle Sizes: Aggr. >2.00mm, Coarse Sand=2.00-0.42mm Fine Sand=.42-0.074mm Silt=0.074-0.005mm Clay=< 0.005mm

7/11

State of Ohio
Department of Transportation
Division of Highways
Testing Laboratory

LOG OF BORING

Date Started 1-12-83 Sampler Type SS Dia 1 3/8" Water Elev
Date Completed 1-12-83 Casing Length Dia

Project Identification GUERNSEY
GUE-70-19.37 (EB)
SUBSURFACE INVESTIGATION
RENOVATION TO MOTORIST FACILITIES

Boring No Station & Offset TEST LOCATION B Surface Elev 935.5'

Elev	Depth	Std. Pen. (in)	Description	ALLOW BRNG CAP TSF	Field No	Lab No. So	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
935.5	0		SOD AND TOPSOIL												
935.0	1														
933.0	3	3/4/6	REDDISH-BROWN CLAY	0.8	19	31486	0	2	5	32	61	46	22	27	A-7-6
930.5	5		BROWN AND GRAY STONE FRAGMENTS												
929.0	6	29/31/36	WITH SAND, FINES AND BOULDERS		20	31487	33	9	12	22	24	-	-	9	VISUAL
			BOTTOM OF BORING - BOULDERS IMPENETRABLE												

Form TE-63 Particle Sizes: Aggr. >2.00mm, Coarse Sand=2.00-0.42mm, Fine Sand=.42-0.074mm, Silt=0.074-0.005mm, Clay=< 0.005mm

6/11

State of Ohio
Department of Transportation
Division of Highways
Testing Laboratory

LOG OF BORING

Date Started 1-11-83 Sampler Type SS Dia 1 3/8" Water Elev
Date Completed 1-11-83 Casing Length Dia

Project Identification GUERNSEY
GUE - 70 - 19.37 (EB)
SUBSURFACE INVESTIGATION
RENOVATION TO MOTORIST FACILITIES

Boring No C Station & Offset TEST LOCATION C Surface Elev 935.6'

Elev	Depth	Std. Pen. (in)	Description	ALLOW BRNG CAP TSF	Field No	Lab No. So	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class
935.6	0		SOD AND TOPSOIL												
933.1	2	P.S.	REDDISH-BROWN SILT AND CLAY **		7	31560	3	4	11	36	46	41	16	21	A-7-6
930.6	5	4/5/6	REDDISH BROWN GRAVELLY CLAY	4.6	8	31475	25	7	5	27	36	46	20	25	A-7-6
928.1	7	2/4/6	REDDISH BROWN SILT AND CLAY	1.1	9	31476	9	3	4	41	43	40	15	21	A-6a
	10	23/50/58	BROWN SILTY GRAVELLY SAND	9.0	10	31477	28	25	16	17	14	28	7	16	A-2-4
925.6	12	50(0.5')	BROWN WEATHERED ARENACEOUS SHALE		11	31478	37	20	12	19	12	-	-	7	VISUAL
			TOP OF ROCK												
920.6	15	53(0.5')	BROWN WEATHERED CLAY SHALE	-	12	31479	69	14	5	6	6	-	-	10	VISUAL
915.6	20	51(0.5')	GRAY CLAY SHALE	-	13	31480	26	12	16	30	16	-	-	7	VISUAL
			BOTTOM OF BORING												

* WATER WAS ENCOUNTERED AT 15.2' FEET ELEVATION 920.4' AND ROSE TO 5.1 FEET ELEVATION 930.5' IN 15 MINUTES.

** AVERAGE GRADING TRIAXIAL TEST

Form TE-63 Particle Sizes: Aggr. >2.00mm, Coarse Sand=2.00-0.42mm, Fine Sand=.42-0.074mm, Silt=0.074-0.005mm, Clay=< 0.005mm

9/11

State of Ohio
Department of Transportation
Division of Highways
Testing Laboratory

TRIAXIAL COMPRESSION TEST

Station & Offset TEST BORING - C Project Ident. GUE - 70 - 19.37 (E.B.)
Sample No. 7 Lab. No. 31560 - A & B REST AREA
Depth 0.3' — 1.2' Rate of Strain 0.52% / MIN.
Type of Test

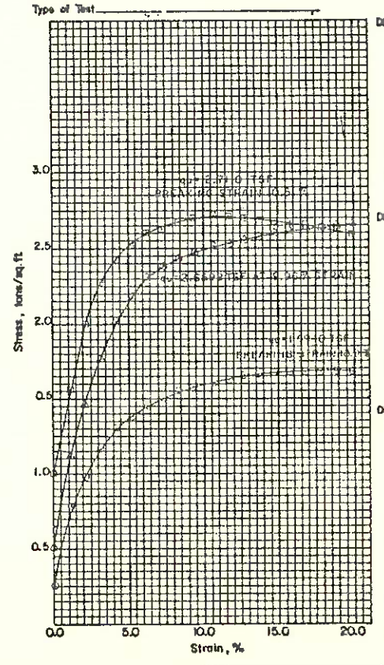


Diagram of Failure / Diagram of Failure

Penetrometer 2.25 TSF
Torvane 1.00 TSF
Chamber Pressure 1.00 kg./cm²

Diagram of Failure / Diagram of Failure

Penetrometer 3.25 TSF
Torvane 1.00 TSF
Chamber Pressure 0.50 kg./cm²

Diagram of Failure / Diagram of Failure

Penetrometer 1.75 TSF
Torvane 0.87 TSF
Chamber Pressure 0.25 kg./cm²

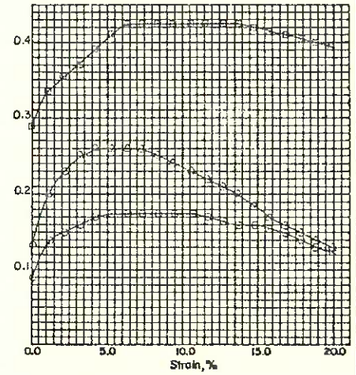
Remarks

10/11

State of Ohio
Department of Transportation
Division of Highways
Testing Laboratory

TRIAXIAL COMPRESSION TEST

Station & Offset TEST BORING - C Project Ident. GUE - 70 - 19.37 (E.B.)
Sample No. 7 Lab. No. 31560 - A & B REST AREA
Depth 0.3' — 1.2'



Physical Characteristics									Applied Load kg/cm²
% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.		
4	4	9	36	47	40	15	21		0.25
5	3	14	38	40	37	13	21		0.50
0	4	6	35	55	45	17	21		1.00

Visual Description
REDDISH-BROWN SILT AND CLAY

Wet Density (lbs./cu.ft)	Dry Density (lbs./cu.ft)	Applied Load kg/cm²
130.38	107.89	0.25
131.32	113.65	0.50
130.69	103.49	1.00