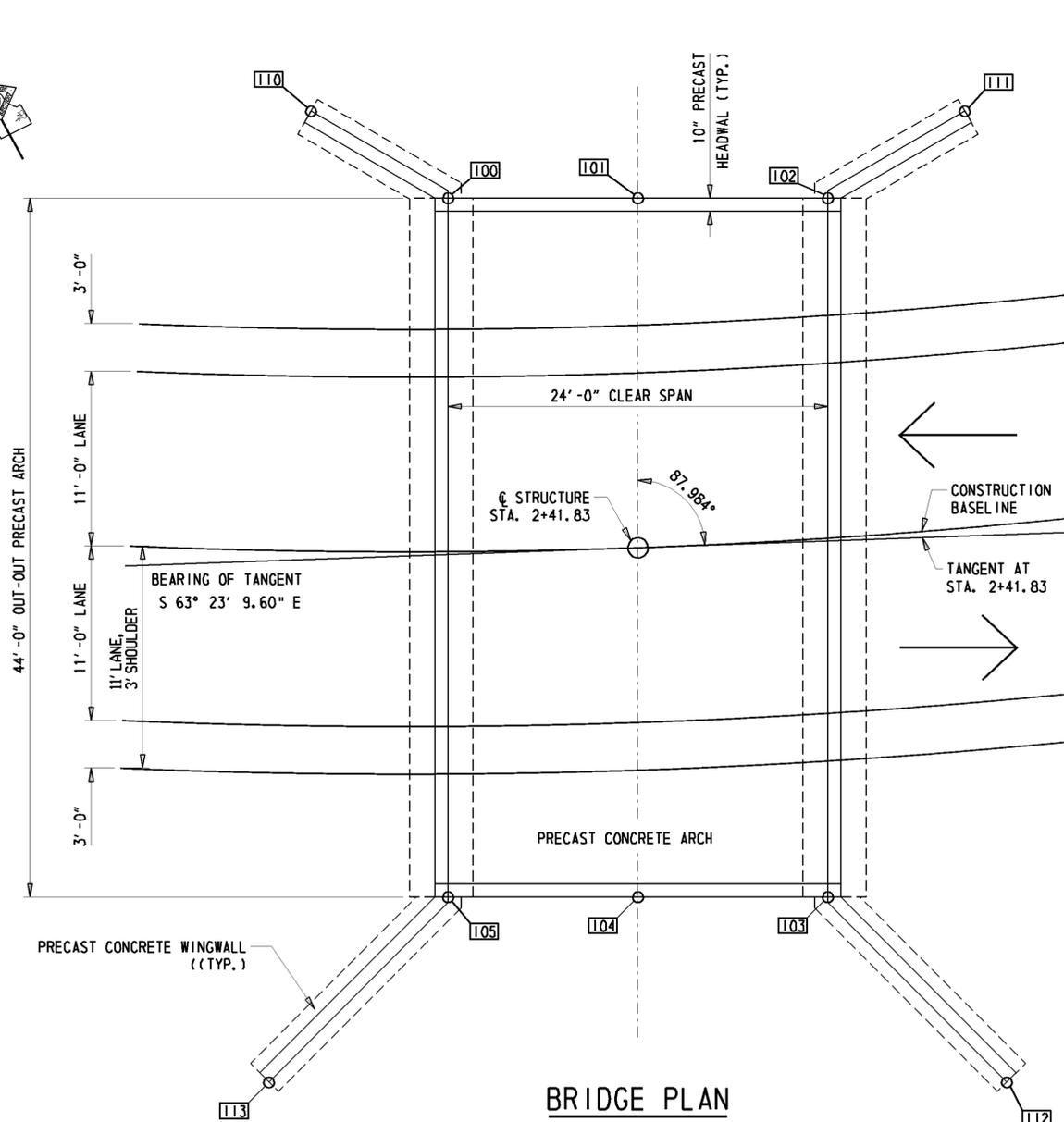


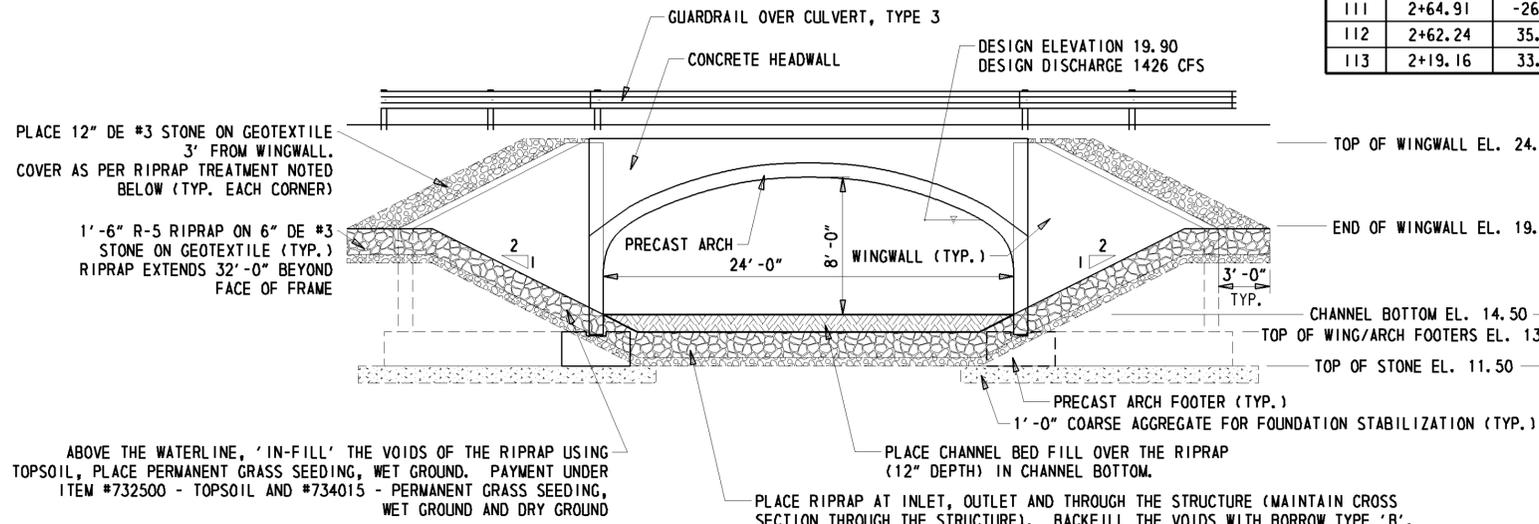
NOTES FOR PRECAST ELEMENTS:

- DESIGN PLANS / WORKING DRAWINGS  
INFORMATION PERTAINING TO THE PRECAST REINFORCED CONCRETE ARCH AND WINGWALL SECTIONS IS INTENDED TO SERVE AS AN INDICATION OF THE TYPE OF CONSTRUCTION ACCEPTABLE FOR USE. THE CONTRACTOR WILL BE REQUIRED TO PREPARE AND SUBMIT FOR APPROVAL. A COMPLETE SET OF DETAILED SHOP DRAWINGS FOR THE PRECAST CONCRETE UNITS THEY PROPOSE TO FURNISH. THE SHOP DRAWINGS SHALL INCLUDE:  
A. AN OVERALL PLAN SHOWING ALL UNITS TOGETHER AND DETAILS OF EACH TYPE OF UNIT.  
B. A PLAN VIEW OF REINFORCEMENT FOR ANY IRREGULAR SHAPED (SKEWED, CURVED, ETC.) SECTIONS.  
C. REINFORCING BAR LIST  
D. BILL OF MATERIALS INCLUDING ALL ACCESSORIES  
E. METHOD AND SEQUENCE OF POST-TENSIONING
- PRECAST ELEMENTS, ACCESSORIES AND INSTALLATION  
PAYMENT FOR ITEM 602506 - PRECAST CONCRETE CULVERT ARCH AND ITEM 6025XX - PRECAST CONCRETE RETAINING WALL SHALL INCLUDE:  
A. ALL PRECAST ELEMENTS FOR THE RESPECTIVE ITEM (ARCH, FOOTERS, TOEWALLS) UNDER ITEM 60256 AND WINGWALLS UNDER ITEM 6025xx ).  
B. ALL ASSOCIATED REINFORCEMENT.  
C. ALL ACCESSORIES (INCLUDING, BUT NOT LIMITED TO, WEEP HOLES, CONCRETE FINISH, POST-TENSIONING TENDONS, CONNECTION PLATES, GROUT, JOINT WRAP, THREADED INSERTS) MENTIONED IN THE FOLLOWING NOTES UNLESS NOTED OTHERWISE.  
D. DELIVERY AND INSTALLATION OF ALL PRECAST ELEMENTS AND ALL ACCESSORIES
- WEEP HOLES  
APPROXIMATE LOCATIONS OF WEEP HOLES ARE DETAILED IN THE PLANS. EXACT LOCATION SHALL BE DETERMINED BY THE LOCATION OF JOINTS IN THE PRECAST CULVERTS (MIN. 1'-0" FROM A JOINT). ELEVATIONS SHALL REMAIN AS DETAILED ON THE PLANS. WEEP HOLES SHALL BE 4" PVC PIPE, EXTEND 3" BEYOND THE INSIDE FACE OF THE CULVERT AND HAVE 2" FALL FROM BACK TO FRONT. ALTERNATELY, THE PRECASTER MAY PROVIDE A 6" SLEEVE FOR FIELD INSTALLATION OF WEEP HOLES. THE SLEEVE SHALL BE FILLED WITH NON-SHRINK GROUT.
- MISCELLANEOUS CONCRETE NOTES  
A. ALL EXPOSED SURFACES SHALL BE PROTECTED WITH A WATER MISCELIBLE, PENETRATING SILANE SEALER SUCH AS ENVIROSEAL 20 BY BASF SUPERIOR OR APPROVED EQUAL.  
B. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- ARCHPOST-TENSIONING  
THE PRECAST BOX CULVERT (or RIGID FRAME or ARCH) SECTIONS SHALL BE POST-TENSIONED TOGETHER WITH A MINIMUM OF FOUR POST-TENSIONING TENDONS. THE CULVERT SHALL BE POST-TENSIONED SUCH THAT THE NEOPRENE GASKETS ARE COMPRESSED ALL AROUND AND THERE IS A 1/2" MAXIMUM GAP BETWEEN SECTIONS. MAXIMUM POST-TENSIONING FORCE SHALL BE 28,900 lbs. POST-TENSIONING DETAILS (PLACEMENT, SEQUENCE OF TENSIONING, etc.) SHALL BE SHOWN IN THE SUBMITTED SHOP DRAWINGS. ALL POCKETS FOR POST-TENSIONING DUCTS SHALL BE FILLED WITH NON-SHRINK GROUT.
- WINGWALL POST TENSIONING  
A. THE PRECAST WINGWALL SECTIONS SHALL BE POST TENSIONED TOGETHER AND POSITIVELY CONNECTED TO THE BOX CULVERT WITH A MINIMUM OF TWO POST-TENSIONING TENDONS. POST-TENSIONING SHALL BE AS PER NOTE 5.  
B. AT LOCATIONS WHERE POST TENSIONING OF THE WINGWALLS IS NOT FEASIBLE, A BOLTED CONNECTION MAY BE USED. BOLTED CONNECTION DETAILS SHALL BE SHOWN IN THE SUBMITTED SHOP DRAWINGS.
- BOLTED CONNECTIONS  
THE BOLTED CONNECTION MUST CONSIST OF A MINIMUM OF TWO 3'-0" WIDE x 2'-0" TALL x 1/4" THICK PLATES PER JOINT WITH AT LEAST FOUR 3/4" BOLTS PER PLATE. ANGLED PLATES SHALL HAVE 8 BOLTS. SLOTTED HOLES IN THE PLATE SHALL NOT BE PERMITTED. HOLES FOR ANCHOR BOLTS MAY BE FIELD DRILLED.
- JOINTS BETWEEN PRECAST SECTIONS  
A. NEOPRENE GASKETS SHALL BE PROVIDED AT THE JOINTS BETWEEN ALL PRECAST UNITS IN ORDER TO MAKE THE JOINTS WATERTIGHT. AFTER INSTALLATION, THE GASKETS SHALL BE COMPRESSED SUCH THAT GAPS ARE NOT VISIBLE.  
B. ALL JOINTS BETWEEN PRECAST BOX CULVERT SECTIONS SHALL BE TONGUE AND GROOVE or ALL JOINTS BETWEEN RIGID FRAME SECTIONS SHALL HAVE A SHEAR KEY ALL AROUND.  
C. ALL WINGWALL TO WINGWALL AND WINGWALL TO BOX CULVERT (or RIGID FRAME or ARCH) JOINTS SHALL HAVE A SHEAR KEY.  
D. THE LOCATIONS OF THE JOINTS IN THE BOX CULVERT (or RIGID FRAME or ARCH) SHALL BE DETERMINED BY THE PRECASTER AND SUBMITTED IN THE SHOP DRAWINGS FOR APPROVAL.  
E. THE REINFORCEMENT SHALL HAVE 2" COVER AT THE END OF EACH SECTION AND MEET OR EXCEED THE MINIMUM AREA OF STEEL PER FOOT DENOTED IN THE PLANS.  
F. ALL JOINT EXTERIORS SHALL BE COVERED WITH A MINIMUM 9" WIDE WRAP CENTERED ON THE JOINT AS PER THE SPECIAL PROVISION FOR ITS RESPECTIVE ITEM.

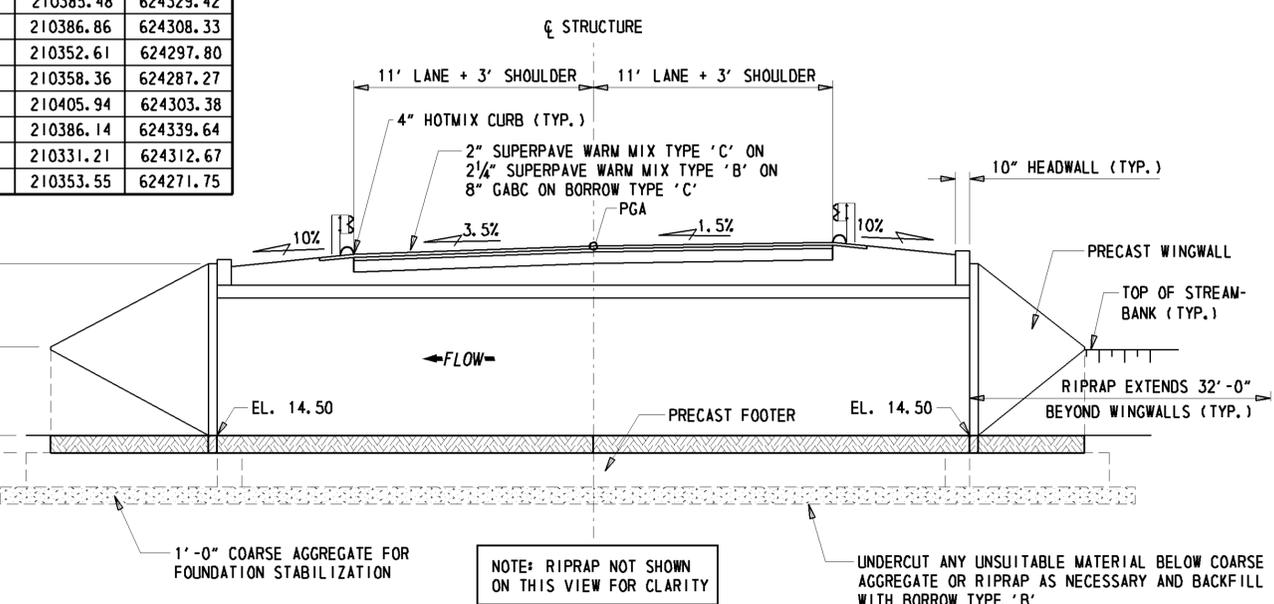


BRIDGE PLAN

WORKING POINTS					
POINT	STATION	OFFSET	NORTHING	EASTING	
100	2+29.98	-22.25	210396.98	624308.35	
101	2+42.65	-21.99	210391.23	624318.89	
102	2+55.29	-21.36	210385.48	624329.42	
103	2+52.48	22.25	210386.86	624308.33	
104	2+41.10	21.99	210352.61	624297.80	
105	2+29.70	21.75	210358.36	624287.27	
110	2+20.74	-27.69	210405.94	624303.38	
111	2+64.91	-26.14	210386.14	624339.64	
112	2+62.24	35.00	210331.21	624312.67	
113	2+19.16	33.48	210353.55	624271.75	



BRIDGE ELEVATION



BRIDGE SECTION