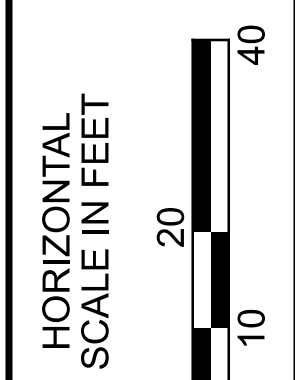
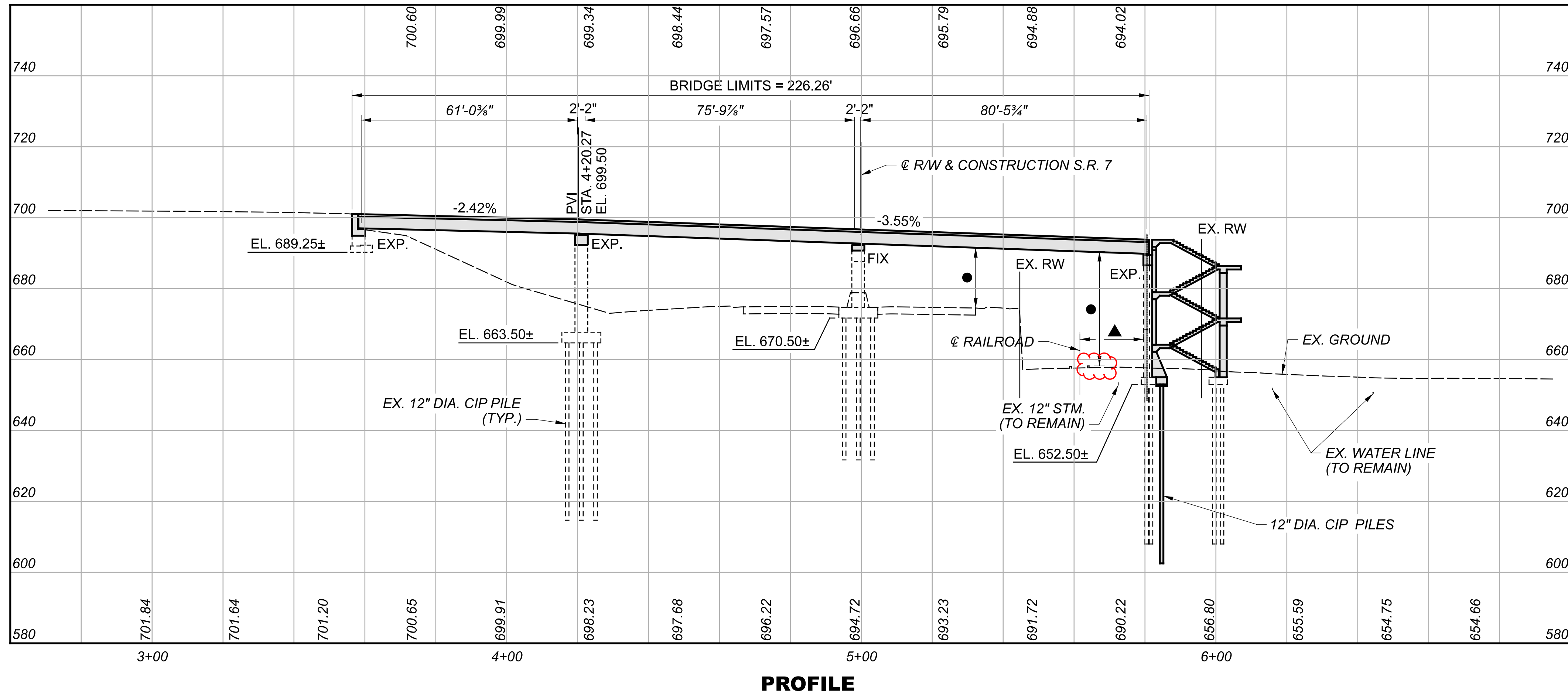


BENCHMARK DATA				
BM #1 STA.	1190+44.56	ELEV.	657.26	OFFSET 84.18', RT.
BM #2 STA.	1190+63.65	ELEV.	697.42	OFFSET 98.87', LT.
BM #3 STA.	1190+68.59	ELEV.	674.09	OFFSET 38.57', RT.
BM #4 STA.	1191+94.88	ELEV.	701.55	OFFSET 165.31', LT.

- LEGEND**
- BORING LOCATION
 - 17'-0" ACTUAL MINIMUM VERTICAL CLEARANCE (HIGHWAY)
 - 14'-10 1/2" EXISTING MINIMUM VERTICAL CLEARANCE (HIGHWAY)
 - 32'-10 1/8" ACTUAL MINIMUM VERTICAL CLEARANCE (RAILROAD)
 - 30'-4 3/8" EXISTING MINIMUM VERTICAL CLEARANCE (RAILROAD)
 - 23'-0" CONSTRUCTION MINIMUM VERTICAL CLEARANCE (RAILROAD)
 - ▲ 16'-6" EXISTING / ACTUAL MINIMUM HORIZONTAL CLEARANCE
 - ▲ 15'-0" CONSTRUCTION MINIMUM HORIZONTAL CLEARANCE



ESTIMATED PILE LENGTHS	
LOCATION	LENGTH
FORWARD ABUTMENT / STAIRS	55'



EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE SUPPORTED ON PILES.

SPANS: 62'-0"±, 78'-0"± AND 81'-6"± C/C OF BEARINGS.
 WALK WIDTH: 8'-0"± F/F RAILING
 LIVE LOAD: 85 PSF
 SKEW: 14°28'00"± RIGHT FORWARD
 WEARING SURFACE: 1/4" EPOXY WATERPROOFING
 APPROACH SLABS: NONE
 ALIGNMENT: TANGENT
 CROWN: 0.0156 FT/FT
 STRUCTURE FILE NUMBER: 0700630
 DATE BUILT: 07/01/1968
 DISPOSITION: SUPERSTRUCTURE TO BE REMOVED AND REPLACED.
 EXISTING PIERS AND ABUTMENTS TO BE MODIFIED.

PROPOSED STRUCTURE

TYPE: PRESTRESSED, PRECAST CONCRETE I-BEAMS (TYPE 2) WITH COMPOSITE REINFORCED CONCRETE SLAB ON EXISTING REINFORCED CONCRETE PIERS AND ABUTMENTS.

SPANS: 61'-0 3/8, 75'-9 7/8, AND 80'-5 3/4 C/C BEARINGS
 WALK WIDTH: 8'-0" TOE/TOE RAILING
 LIVE LOAD: 90 PSF & H15-44
 FUTURE WEARING SURFACE: 0 PSF
 SKEW: 14° 28' 00"± RIGHT FORWARD
 WEARING SURFACE: 1" MONOLITHIC CONCRETE
 APPROACH SLABS: NONE
 ALIGNMENT: TANGENT
 CROWN: 0.0156 FT/FT
 DECK AREA: 2339 SF
 COORDINATES: LATITUDE N 40°05'55.22"
 LONGITUDE W 80°43'08.09"

SITE PLAN
 BRIDGE NO. BEL-00007-22.160
 PEDESTRIAN BRIDGE OVER S.R. 7

SFN 0700630	
DESIGN AGENCY	
1500 LAKE SHORE DRIVE, SUITE 100, COLUMBUS, OH 43204 (614) 486-4383	
DESIGNER	CHECKER
MRS	EDA
REVIEWER	
BSM 07-10-24	
PROJECT ID	
114382	
SUBSET	TOTAL
1	29
SHEET	TOTAL
P.34	69

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

- BR-2-15 REVISED 01-21-22
- EXJ-6-17 REVISED 01-19-24
- PSID-1-13 REVISED 01-20-23
- VPF-1-90 REVISED 07-21-23

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE 9th EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

OPERATIONAL IMPORTANCE

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING

DESIGN LOADING INCLUDES:
 PEDESTRIAN LIVE LOAD: 0.090 KIPS/SQ.FT.
 VEHICULAR LIVE LOAD: H15-44 VEHICLE (TRUCK ONLY)

DESIGN DATA

CONCRETE CLASS QC2:
 COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE, FORWARD ABUTMENT, STAIR TOWER)

CONCRETE CLASS QC1:
 COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

CONCRETE REINFORCEMENT:

EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60-KSI (ALL STRUCTURES)

STEEL CIP PILES 12-INCH ASTM A252 GRADE 2 - YIELD STRENGTH 35 KSI

CONCRETE FOR PRESTRESSED BEAMS:
 COMPRESSIVE STRENGTH (FINAL) - 7 KSI
 COMPRESSIVE STRENGTH (RELEASE) - 5 KSI

WELDED WIRE FABRIC:
 YIELD STRENGTH - 70 KSI

PRESTRESSING STRAND:
 AREA = 0.217 SQ.IN.
 ULTIMATE STRENGTH = 270 KSI
 INITIAL STRESS = 202.5 KSI
 (LOW RELAXATION STRANDS)

MONOLITHIC WEARING SURFACE

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

GENERAL NOTES

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SUPPORT OF FORWARD ABUTMENT DURING STRUCTURE REMOVAL AND WHILE CONSTRUCTING NEW STAIR TOWER AND FORWARD ABUTMENT MODIFICATIONS. PAYMENT FOR TEMPORARY SUPPORT OF THE FORWARD ABUTMENT SHALL BE INCLUDED IN THE LUMP SUMP ITEM BID FOR ITEM 202 - PORTION OF STRUCTURE REMOVED, AS PER PLAN.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE)

THE ULTIMATE BEARING VALUE IS 197.5 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES.

ABUTMENT PILES:

- 4 PILES 60 FEET LONG, ORDER LENGTH
- 1 DYNAMIC LOAD TESTING ITEMS

PROVIDE PLAIN CYLINDRICAL CASINGS WITH A MINIMUM PILE WALL THICKNESS OF 0.25 INCH FOR THE CAST-IN-PLACE REINFORCED CONCRETE PILES.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE: HIGH-PRESSURE WATER BLASTING WITH, OR WITHOUT, ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT OR VACUUM ABRASIVE BLASTING.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

UNCLASSIFIED EXCAVATION SHALL INCLUDE THE REMOVAL OF EXISTING PAVEMENT (WHERE NECESSARY) AND EARTHWORK IN ORDER TO CONSTRUCT ABUTMENTS AND FOOTINGS. IN ADDITION TO BACKFILL AND GRADING TO ENSURE POSITIVE DRAINAGE, WORK INCLUDES AGGREGATE AND ASPHALT TO RESTORE PAVED SURFACES. PAVEMENT BUILD-UP SHALL MATCH EXISTING. WORK SHALL BE AS DIRECTED BY THE ENGINEER.

PAYMENT FOR LABOR, MATERIAL, AND EQUIPMENT FOR UNCLASSIFIED EXCAVATION SHALL BE INCLUDED IN THE PER CUBIC YARD PRICE BID FOR ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN.

RAILROAD NOTES

THE RAILROAD ENGINEER OR HIS FIELD REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO INSTALL AT GRADE PROTECTION CONSISTING OF FILTER FABRIC AND PLYWOOD TO PREVENT FOULING OF THE BALLAST FROM DEBRIS. SUCH PROTECTION WILL STAY IN PLACE FOR THE DURATION OF CONSTRUCTION ACTIVITIES.

THE RAILROAD ENGINEER OR HIS FIELD REPRESENTATIVE MAY REQUIRE THE CONTRACTOR TO INSTALL VERTICAL DEMOLITION DEBRIS SHIELDING DURING DEMOLITION OF THE FORWARD ABUTMENT AND EAST STAIRS.

ENSURE ALL FALSEWORK, BRACING AND FORMS HAVE A MINIMUM VERTICAL CLEARANCE OF 22'-0" ABOVE THE TOP OF RAIL AND 13'-0" HORIZONTAL CLEARANCE FROM THE CENTERLINE OF TRACK.

THE PROPOSED PROJECT WILL NOT CHANGE THE QUANTITY OR CHARACTER OF FLOW IN THE RAILWAY'S DITCHES OR DRAINAGE STRUCTURES.

ALL WORK TO BE PERFORMED ON, OVER, UNDER, OR ADJACENT TO THE RAILROAD RIGHT-OF-WAY SHALL COMPLY WITH THE NORFOLK SOUTHERN RAILWAY COMPANY ("RAILROAD", "NSR" OR "NS") PUBLIC PROJECTS MANUAL (APPENDIX E, SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS, AND APPENDIX H1, OVERHEAD GRADE SEPARATION DESIGN CRITERIA). WHEN IN CONFLICT WITH OTHER PROJECT SPECIFICATIONS, THE MOST STRINGENT ONE SHALL APPLY.

GENERAL NOTES
 BRIDGE NO. BEL-00007-22.160
 PEDESTRIAN BRIDGE OVER S.R. 7

SFN	0700630
DESIGN AGENCY	
DESIGNER	MRS
CHECKER	EDA
REVIEWER	BSM 07-10-24
PROJECT ID	114382
SUBSET	2
TOTAL	29
SHEET	P.35
TOTAL	69